

REPORT OF NATIONAL HAY CONVENTION IN THIS ISSUE

THE AMERICAN

ELEVATOR AND

GRAIN TRADE

Established 1882

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Established 1882

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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

One Dollar Per Annum
SINGLE COPIES, 15 CENTS

VOL. XL

431 South Dearborn Street, Chicago, Ill., September 15, 1921

NO. 3

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Ship me 5 gallons Enoz Special Moth Liquid with one Enoz Baby Fountain Spray. I will use it freely. If it does not meet all your claims, I will return it and pay you nothing. If it does meet your claims, I will pay for the 5 gallons Enoz and Spray \$20. F.O.B. Chicago.

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ENOZ SPECIAL MOTH LIQUID is the one Compound which can, with safety, be used in elevators and flour mills for extermination of insect life in its various stages. No danger of injuring the operator or equipment. And it instantly kills moths, moth eggs, and moth worms.

Insect depredation costs approximately 5 per cent of each grain crop. If you use ENOZ you don't contribute.

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installed at the large plant of the
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COLUMBIA MOTOR TRUCK SCALES Are the BEST—"SAVE REPAIR BILLS"

Because they are easy to build, simple in construction, well made and retain their accuracy longer than any scale on the market.

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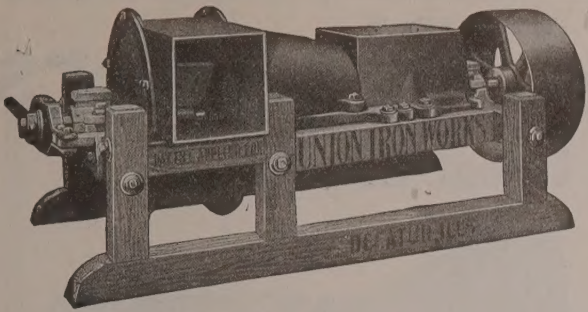
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Save money and send for list of our guaranteed rebuilt scales. All makes and capacities. Tell us what you want. Let us repair your scales—any make. We also carry parts. Finest equipment for scale work in Chicago.



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THE WESTERN LINE

For more than 50 years WESTERN SHELLERS and CLEANERS have shown their superiority. We call attention also to our complete line of Elevating, Conveying and Power Transmission Machinery, all of which is set forth in our general catalog No. 27 copy of which will be mailed on request.

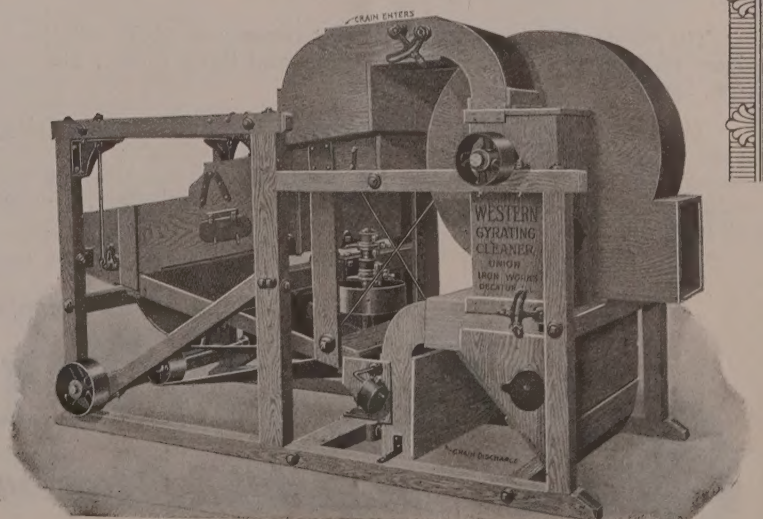
We have everything for Elevator or Mill. Prompt deliveries await your orders.

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"Western" Gyrating Cleaner

Corn Shellers and Cleaners

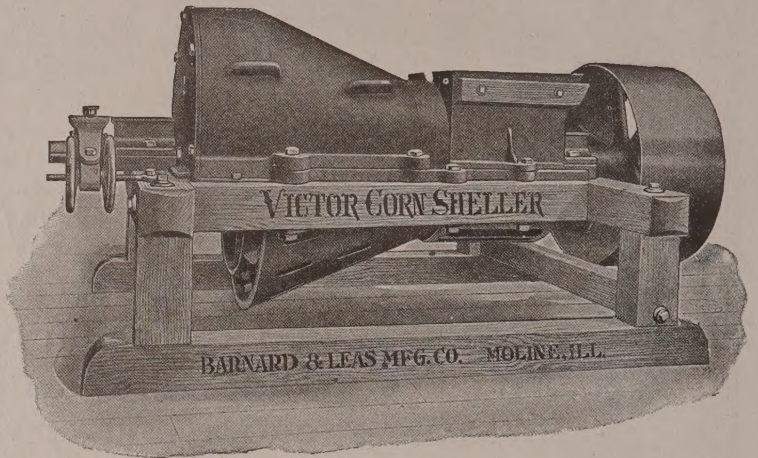
That Possess Special Features of Great Importance

The Victor Corn Sheller

Illustrated to the right is the STANDARD sheller of the world. It is made to shell only, and is particularly adapted to elevators where it is desired to shell corn in the basement, and separate and clean it in the upper part of the house.

It is made in seven different sizes, ranging in capacities from 60 to 1,500 bushels per hour. The teeth on the shelling cone and the shelling surfaces of the casing, are chilled, thus giving these parts great durability.

The hopper feeds a steady stream as long as the corn is passing into it and is so constructed that it cannot clog. The long, heavy journal boxes are securely bolted to the wooden frame, which makes the machine rigid and light running.



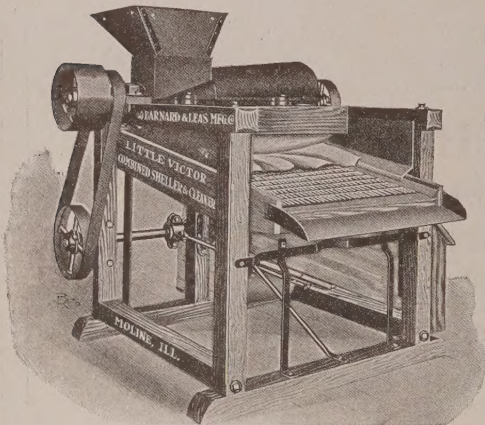
Little Victor Combined Corn Sheller & Cleaner

Illustrated to the left shells and thoroughly cleans corn in one operation.

Made in two sizes, ranging in capacities from 60 to 150 bushels per hour. The small size machine can be placed in a small space 4'9" x 4'5", the large size, 5'3" x 7'0".

This machine is equipped with our PATENT FINGER SIEVE which absolutely prevents choking and cleans the corn thoroughly. The corn after being shelled, passes through the sieve on the shaker, and is thoroughly separated from cobs, cob ends, husks, etc.; it then passes into the last separation trunk and through a strong current of air, which takes out all chaff, silk and other light impurities.

Anyone wanting a machine of small capacity, yet strong and durable will find this machine to meet all requirements. It is in use everywhere and is giving the best of satisfaction.



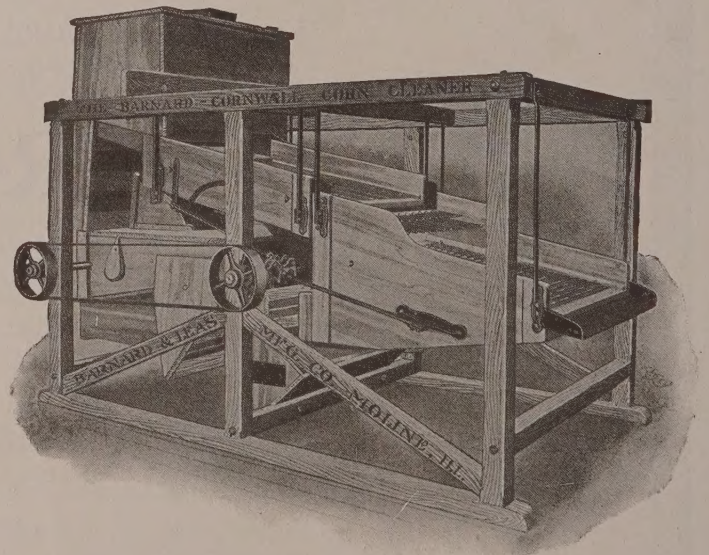
Barnard-Cornwall Corn Cleaner

Illustrated to the right is the most practical type of sieve corn cleaner on the market. It was the FIRST SHAKER corn cleaner built. It now has many imitators, but they all lack the one essential feature—PATENT FINGER SIEVE—that has given the Barnard-Cornwall Corn Cleaner its great popularity.

It is the only form of sieve made that will remove, without clogging, the small cob ends and pieces of cob always present in corn cleaned by other machines.

The Barnard-Cornwall Corn Cleaner removes all chaff, silk, husks, pieces of cob, cob ends, shrunken grains and light, broken pieces of corn, leaving the corn absolutely clean.

The machine is dustless, light running and durable, never clogs, saves the screenings for feed, cleans the corn thoroughly in one operation, and is in every respect the ideal machine for cleaning corn and other small grains. We also make a small capacity corn cleaner; ask us for details.



Bulletin 16-M shows our complete line; write for your copy today

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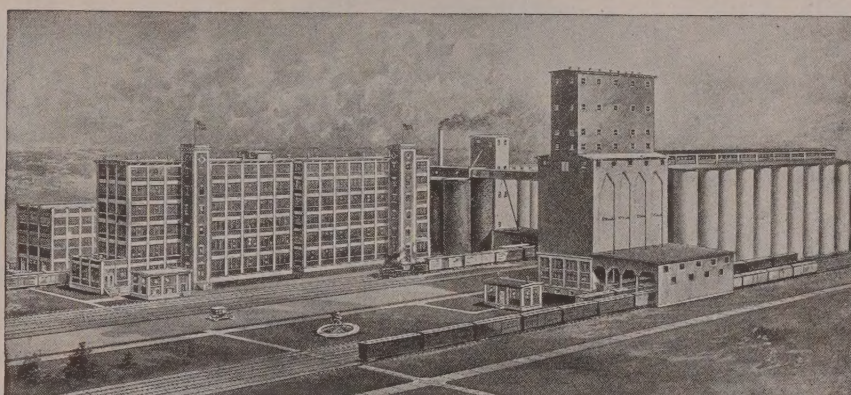
Conveying and Power Transmitting Machinery

FOR THE LARGE AND SMALL ELEVATOR AND MILL

Endurance is the Test of Quality

WELLER MADE EQUIPMENT STANDS THE TEST

Plant of the
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Kansas City,
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Equipped With
Weller-Made
Elevating and
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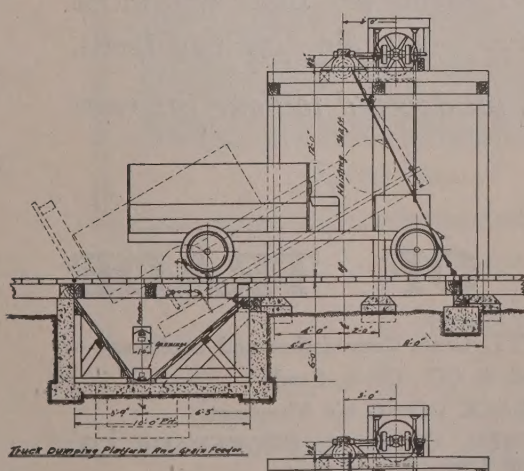
Most of the large and a great number of the small elevators and mills built in the past thirty years are equipped with Weller-Made Machinery—it is a matter of pride with us that many of our customers who, when starting, bought of us, when they were ready to expand specified for equipment made by Weller.

We design and make a complete line of Elevating, Conveying and Power Transmitting Machinery adapted to the handling of Grain, Coal, Etc.

You are invited to correspond with us about your equipment needs. Our engineering department is able to render most satisfactory service with layouts and suggestions and to carry out your wishes.

Catalogue "M" Grain Elevators—Sent on Request.

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Truck Dumping Platform And Grain Feeder

Can be installed in any elevator.

Does not require the services of an expert; anyone familiar with tools and machinery can build the frame and install the lift.

Once erected it requires very little attention.

All the mechanism is overhead in full view of the operator at all times.

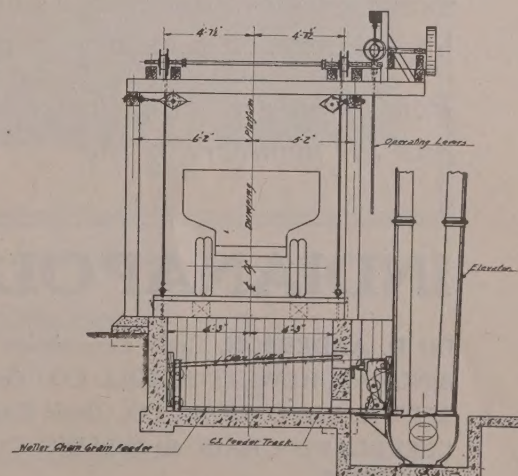
Easily controlled.

Worm gear on hoisting shaft gives positive lock at any point of lift.

No brakes; no air chambers; no hydraulic pumps.

Can be attached to line shafting, operated by motor, gas engine or arranged for hand power.

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Indianapolis is known as the largest inland railroad city in the country and is the natural destination for shipments of grain from Indiana, Illinois, Ohio, Michigan, Wisconsin and states adjoining.

Its geographical location together with its railroads radiating to all sections of the country, makes it a logical outlet and distributing point to the East, South and Southeast.

These splendid railroad facilities assure quick handling of shipments with prompt returns on same.

Indianapolis also takes a natural



The Indianapolis Board of Trade

pride in having the largest corn mills in the country which, together with its flour mills and vast array of manufacturing industries, creates an exceedingly large local consumption of wheat, corn, oats, rye and hay annually.

This local and foreign demand makes for top prices on all shipments.

The market's adequate weighing facilities, its efficient inspection department, and increased elevator storage and drying equipment makes Indianapolis more and more important each season as a market for shippers and buyers of grain, hay and feeds.

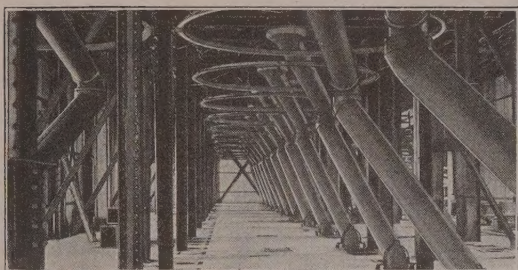
Route your grain and hay to any of the following firms, all devoted to your interests and all members of the

INDIANAPOLIS BOARD OF TRADE

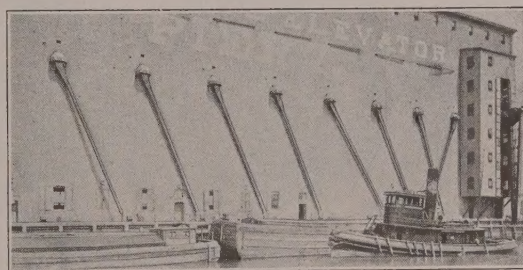
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BINGHAM-HEWETT-SCHOLL CO., Grain Merchants
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URMSTON ELEVATOR CO., Grain Commission
H. E. KINNEY GRAIN CO., Receivers and Shippers

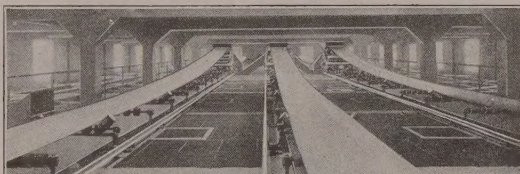
WEBSTER GRAIN ELEVATOR EQUIPMENT



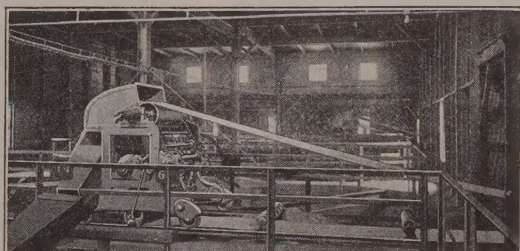
Spouting Machinery



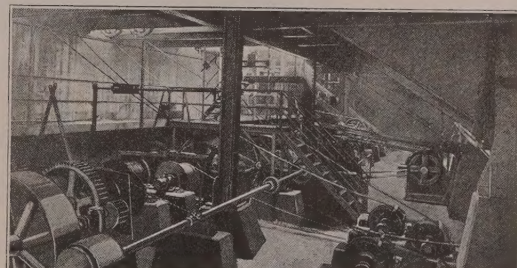
Boat Loading Spouts and Marine Leg



Belt Conveyor



Tripping Equipment



Car Pullers

When You Specify
WEBSTER GRAIN ELEVATOR EQUIPMENT

You May Feel Confident That You
Are Buying Machinery That Will
Give Sustained, Efficient Service
at Low Operating Cost.

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CINCINNATI

THE GATEWAY TO THE SOUTH AND EAST

Has the "square deal" plugging system for hay.

Has reconsignment and transit privileges and other favorable points which insures most successful handling of grain or hay shipments.



Home of the Cincinnati Grain and Hay Exchange

Is the terminal point for 200,000 miles of railways and therefore a convenient shipping point for the country dealer, and local buyers are enabled to distribute all products quickly and to best advantage. Has weighing and inspection service second to none and up-to-date grain and hay merchants constantly safeguarding their patrons' interests.

Those are just a few of the reasons why you should ship your Grain and Hay to Cincinnati. Ship to any of the following responsible grain and hay firms, all members of the

Cincinnati Grain & Hay Exchange

A. BENDER, Flour, Grain and Feeds

BINGHAM-SCHOLL GRAIN CO., Grain Exclusively

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DE MOLET GRAIN CO., Grain and Hay

EARLY & DANIEL CO., Hay, Grain, Feed

FITZGERALD BROS. CO., Grain and Hay

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MUTUAL COMMISSION COMPANY, Strictly Commission

THE NUTRITIA PRODUCTS CO., Feeds

SMITH, EDW. A., Receiver and Shipper of Hay

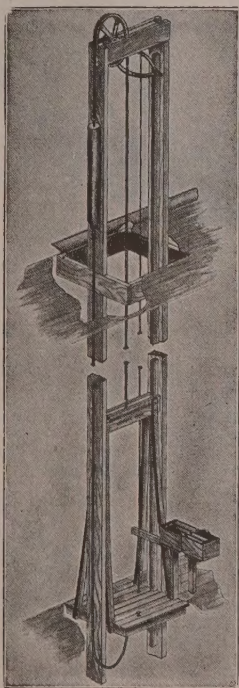
QUALITY WHICH IS ECONOMY

Cheapness never was nor never will be economy. But when you buy a standard article of grain elevator machinery at a fair price that produces better results in the operation of your elevator plant, that's true economy.

BETTER RESULTS ALWAYS FOLLOW THE ADOPTION OF THE SIDNEY LINE OF GRAIN HANDLING MACHINERY

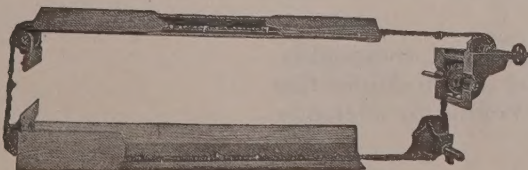
Sidney Combined Sheller and Boot, without take-ups on boot.

A combination of our regular sheller and standard cast iron elevator boot requires no expensive hopping and eliminates deep tank or pit under the elevator. Guaranteed to work successfully on corn in any condition.



The Sidney Ball Bearing Safety Man Lift reduces insurance, number of accidents, labor, etc.

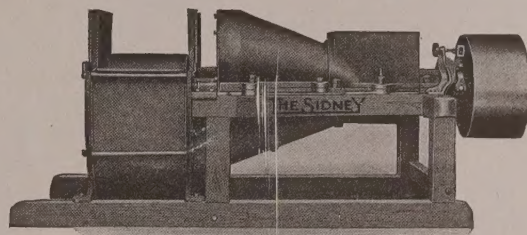
We also manufacture conveyors, elevator heads and buckets, wood and iron elevator boots, flexible loading spouts, and everything to equip your elevator from pit to cupola.



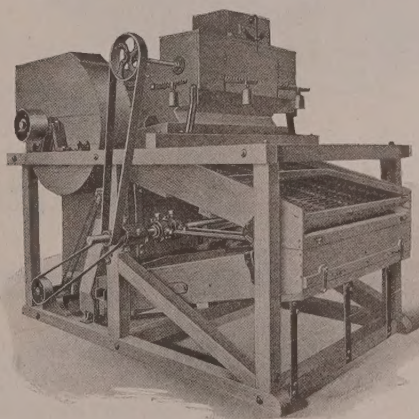
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Catalog—
Free for asking

The Philip Smith Mfg. Co.
SIDNEY, OHIO

Every Manager
Should Have
Our Catalog

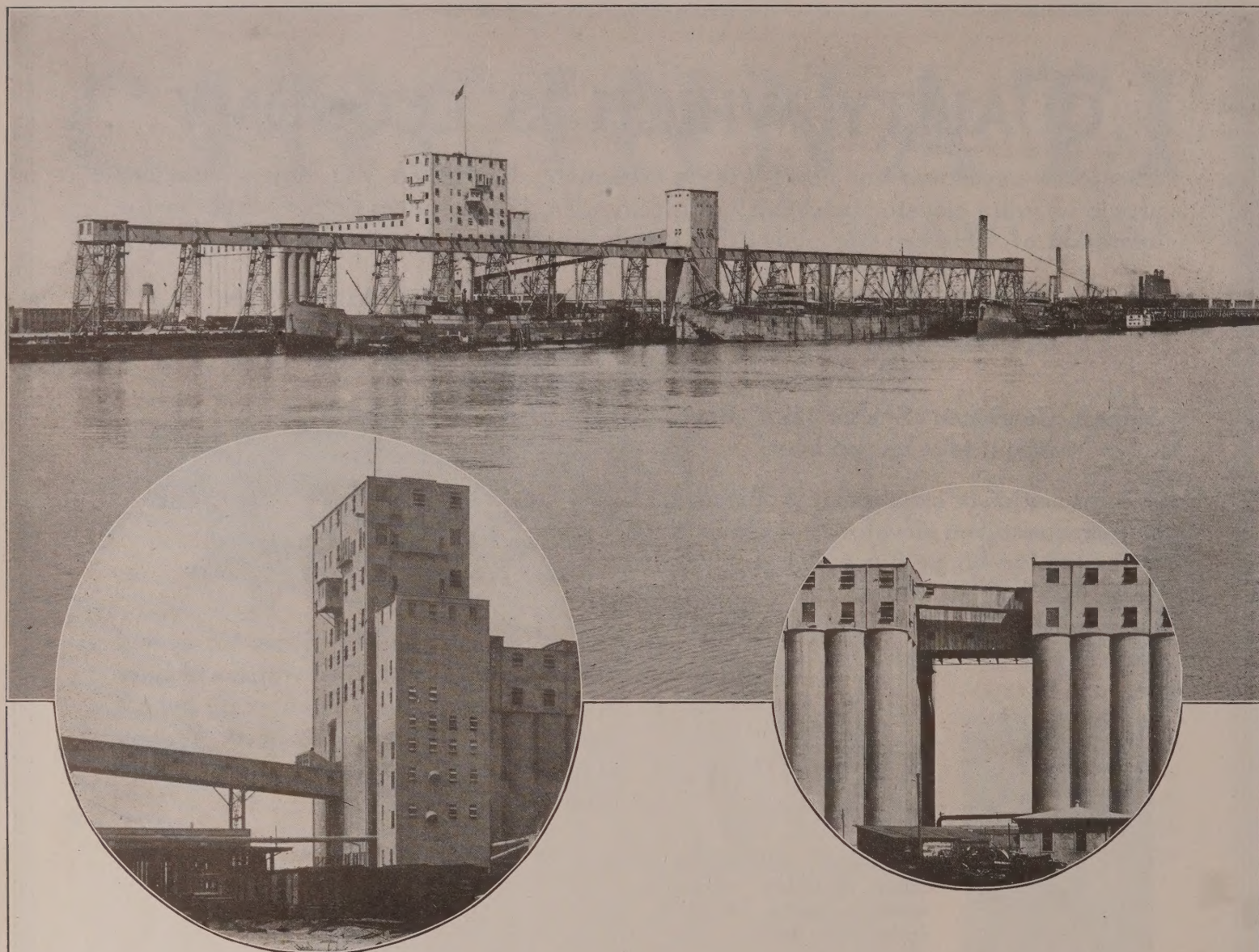


The Sidney Double Shoe Corn and Grain Cleaner is the last word in cleaner construction. Will clean corn, wheat and oats without change of screen. Guaranteed to do perfect work. Send for circulars.



Sidney Style B Grain Drag

Cast iron lining and wrought iron return track included. The chain fits the box lining perfectly, so that it cleans the drag, and where used for different kinds of grain there is no mixing of grain.



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THE installation of the right conveyor belting in grain elevators—belting that has proved its ability to give the best service at the least cost—is a vital factor in bringing down the ultimate cost of operation.

U. S. Grain Conveyor Belts are known, wherever grain is handled, for their absolute dependability and economy of operation.

They are designed by men who understand, thoroughly, every phase of grain elevator service, the conditions that must be met and the best type of belting to overcome them.

United States Rubber Company

1790 Broadway

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Branches in Every Industrial Center





*OUR RECORD FOR HANDLING OF ONE-FOURTH TO
ONE-THIRD TOTAL RECEIPTS OF HAY IN THE ST.
LOUIS MARKET DURING THE PAST FIVE YEARS IS
A TESTIMONIAL TO SERVICE.*

ESTABLISHED 1877

LANGENBERG BROS. GRAIN CO.

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GRAIN=HAY

Receivers and Shippers

44 Years of Knowing How

D. S. MULLALLY

2nd Vice Pres. in charge of Hay Department

LANGENBERG HAY & GRAIN CO.
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*Grain
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Established 34 Years

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On October 3, 4 and 5 the Wagner offices at 208 S. La Salle St., Chicago will welcome all visitors to the Grain Dealers National Association 25th Convention. The Chicago meeting will be a "Parliament of the Grain Trade."

Call on Wagner

J. C. SHAFFER GRAIN COMPANY

CASH GRAIN

SHAFFER & STREAM

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PRIVATE WIRES

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The Grain Business involves a multiplicity of specialties. One must know many things to successfully carry on a grain business. Has it ever occurred to you that Growth and Success do not just happen? Business Growth, and Business Success are based upon Good Service.

Good Service involves experience and financial stability. Here you have a firm which has grown consistently, based upon its service. Certainly it is to your best interests to patronize those who know the grain business in every phase.

We buy grain from the country. We reach the larger markets with private wires. We sell grain everywhere.

We are interested in you, and are willing to demonstrate that interest. Consign us. Sell us. Buy from us.

Private wires in many important markets

GRAIN MERCHANTS

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CHICAGO

ARMOUR **Grain Company**

GRAIN MERCHANTS

Manufacturers of ARMOUR'S STOCK and DAIRY FEEDS. Invites the patronage of its friends in the trade on the following high class cereal products—

Armour's Rolled Oats
Armour's Pancake Flour
Armour's Spaghetti

ASK YOUR
GROCER

Armour's Corn Flakes
Armour's Macaroni
Armour's Noodles

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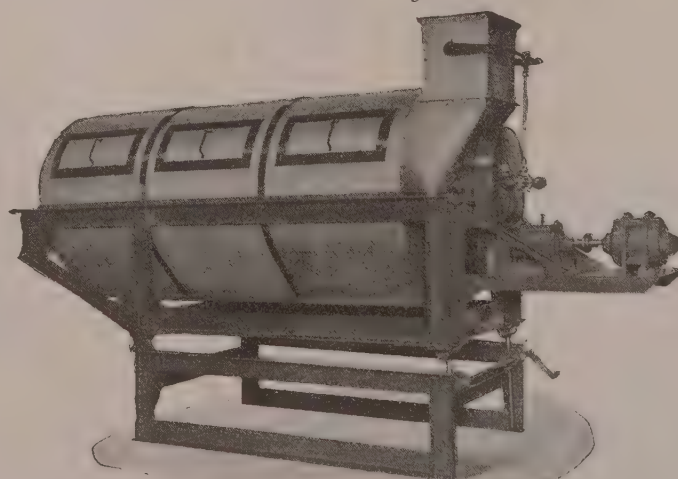
436-38 PIERCE BLDG.
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761 Livestock Exchange
KANSAS CITY

GRAIN, HAY AND SEEDS

Fastest Growing Commis-
sion House in America!

The ELLIS ROTARY DRIER Ball Bearing



We illustrate an Ellis Rotary Drier, Type "B," specially constructed with automatic feeding device, direct drive and adjusting screws for the purpose of quickly and easily changing the rate of flow. The drier is also equipped with a direct connected exhaust fan unit to remove the steam and vapor. Quotations on request.

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CONVEYING, ELEVATING, POWER TRANSMISSION MACHINERY and COMPLETE GRAIN ELEVATOR EQUIPMENT

Including the Well Known

UNITED STATES CORN SHELLERS
UNITED STATES GRAIN CLEANERS

Which are unsurpassed in machines of this character.

U. S. Quality Best

U. S. Prices Lowest

THE B. S. CONSTANT MFG. CO.
BLOOMINGTON, ILL.



YOU CAN'T GO
"OVER THE TOP,"

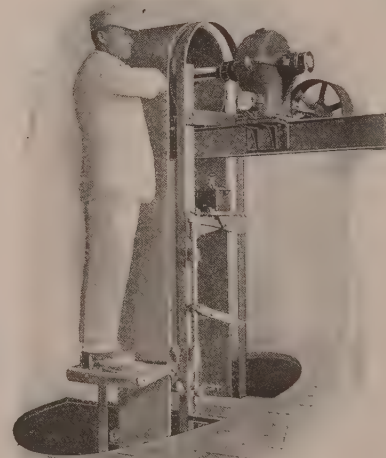
ON A

WOLF EMPLOYEES ELEVATOR

With Automatic Safety Stop

Safety is a first consideration. But when you combine all the distinct advantages of a Wolf Employees Elevator you will wonder why you had not installed it long ago.

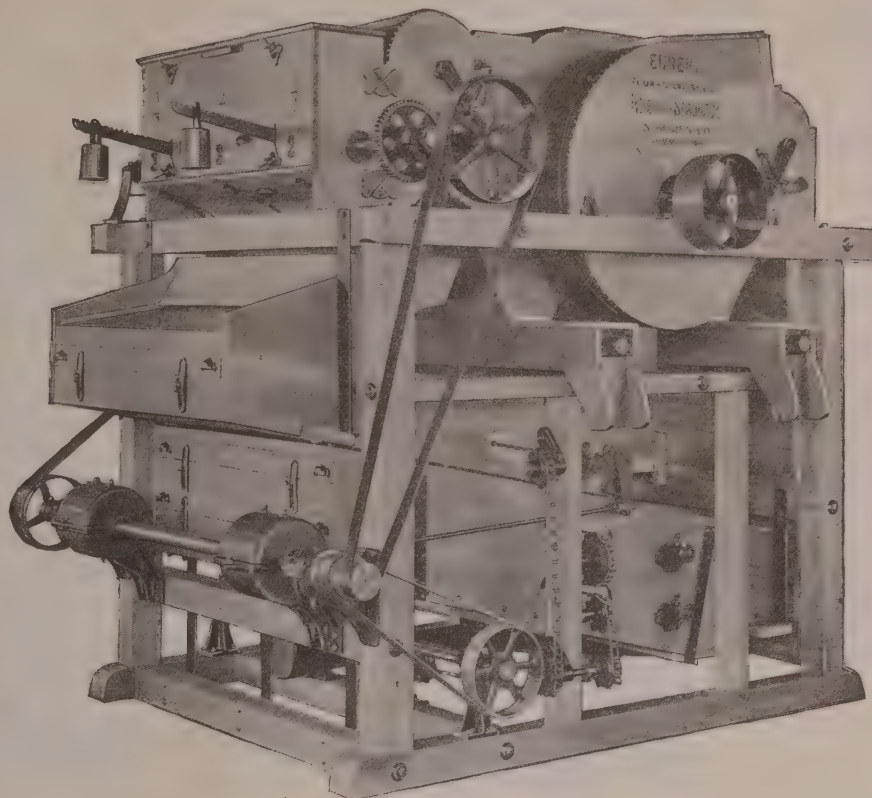
Millers conserve their energy and look more closely after each machine—give closer attention to all the details and get



better quality, a higher yield and take better care of the entire equipment. In feed mills and elevators its use is a very marked profit.

Get Bulletin 106-M. Quick delivery and pre-war prices.

THE WOLF COMPANY
CHAMBERSBURG, PA.



With the instant Brush Take-down, Brushes can, in four seconds, be dropped from one side of the machine.

A TRULY MAGNIFICENT CLEANING MACHINE

is this



"EUREKA"



More can naturally be expected of it—better and more precise separations, both by air and sieves—because we provide the mechanical means,—features unique, many of them, to assist the operator to do exactly what he wishes to accomplish.

When you hear a man say: "I can clean my grain right now," you will understand that that man bought a "Eureka" Four Sieve Special Receiving Separator.

New Lists now ready

S. HOWES CO., Inc.

EUREKA WORKS

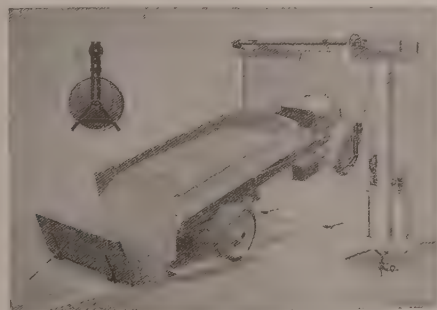
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European Branch: 64 Mark Lane, London, Eng.

McMILLIN TRUCK AND WAGON DUMP

In most all sections a part of the grain is being delivered to the grain elevator by Truck. Unless such elevators are provided with some means for handling the truck it becomes necessary for the elevator operator to shovel the grain out of the truck since the truck driver feels that it is a grain

man's place to take care of his grain. This being a slow proposition a truck man objects to the time lost in this way of unloading, since in a day's hauling the truck man will lose quite a little time. This causes them to call for a better means of unloading. The elevator man also loses time and holds up other grain while unloading the truck.



There is also more or less trouble caused from the long coupled wide bed wagons which are very convenient for the farmers to load, but the coupling of such wagons are too long to be handled on the ordinary drop dump. This truck and wagon dump overcomes all of the above difficulties and in addition will handle the standard short coupled wagons.

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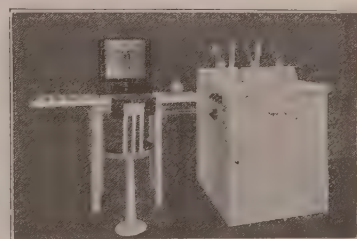
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THE MOJONNIER MOISTURE TESTER for Cereals is based upon an exact gravimetric method of testing cereals or cereal products for moisture and makes test in one-twentieth time usually required for this determination. Now in use in several plants.

As simple to operate as an automobile, and as positive in action. Built for a life time of service. Soon pays for itself through savings effected by actual technical control of moisture in all products handled.

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Mojonnier Moisture Tester Process and Apparatus Patented.

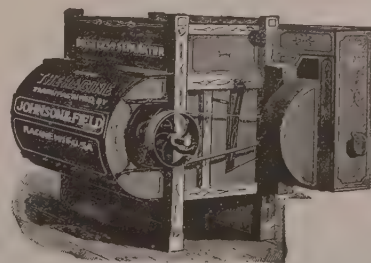
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YOUR PROFITS

**CAN BE INCREASED IF
YOU RUN YOUR GRAIN
OVER OUR**

Dustless Grain and Seed Separator

**Special Screens for All Kinds
of Grain**

Our Machines have probably brought higher grades to more country grain shippers than all other makes combined, saving the cost of each Machine many times in a season.

Write for prices on the "RACINE" line of grain cleaners

JOHNSON & FIELD MFG. CO., Racine, Wis.



400,000 BUSHEL ELEVATOR

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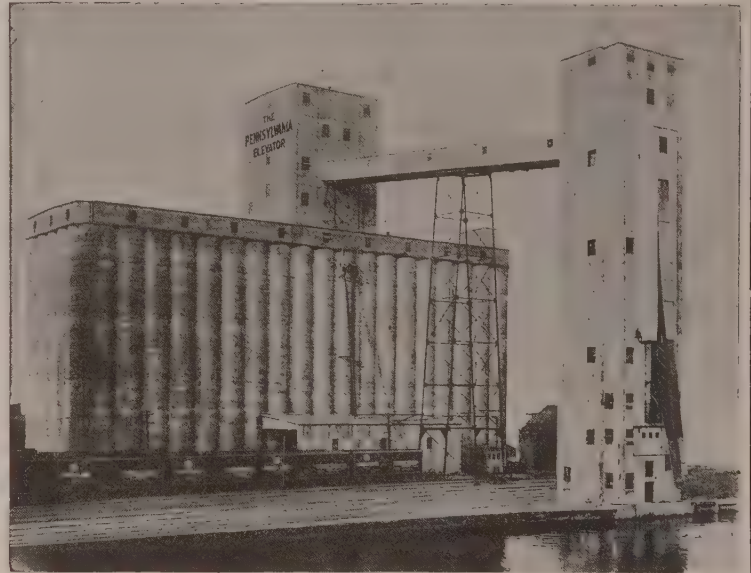
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ARE YOU WORRIED

about the condition of that grain in your bins?

Let us equip your storage with a

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to tell you the exact condition of
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Over 100 Elevators Equipped

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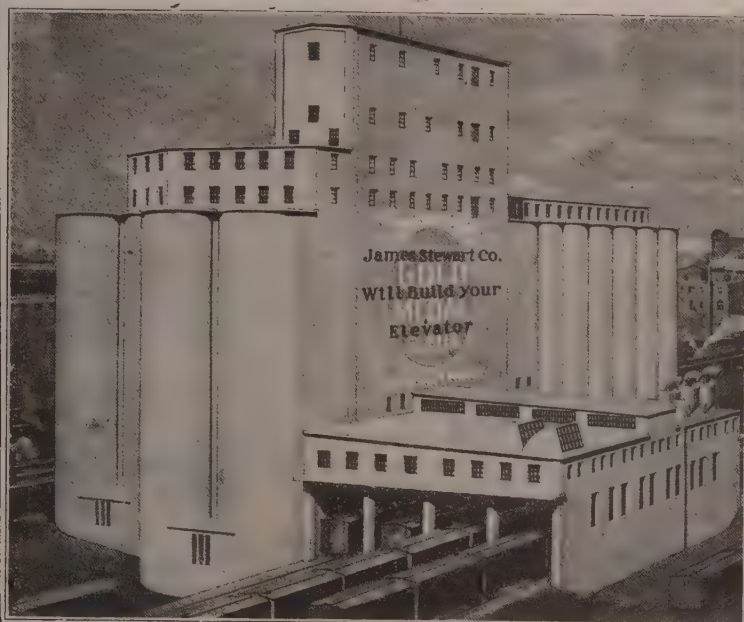
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All-steel machines for all kinds of
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Reinforced Concrete and Steel Ore Dock con-
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Economical Design
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One of the Modern Houses Which Has Made a Record
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Re-inforced concrete elevator—The Baltimore Pearl Hominy Co., Baltimore, Md.

BE PREPARED Build Your New Elevator Now

Up-to-date elevator facilities are required all over the country and now is an ideal time to go ahead with elevator construction. Building costs in this line of work have declined to such an extent that it is now possible to erect a modern GRAIN ELEVATOR combining permanent and fireproof qualities at a very reasonable outlay. Write us for estimates.

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Specialists in Grain Elevator Building
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THE WORLD'S LARGEST ELEVATORS USE THIS BRUSH

For sweeping grain cars and elevators, the STAR BRUSH has no equal. Made of stiff selected fibre, 5 inches long. Guaranteed to outwear four or five corn brooms and do cleaner and faster work. Built on hardwood block 14 inches wide and flared to an 18-inch sweep. Largest elevators in Minneapolis, Duluth, Port Arthur and Ft. William now use this brush exclusively.

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Price \$16.00 per dozen. F. O. B. Minneapolis

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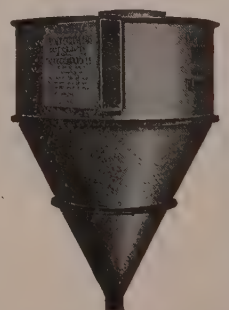
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For Grain Cleaners

ALL STEEL

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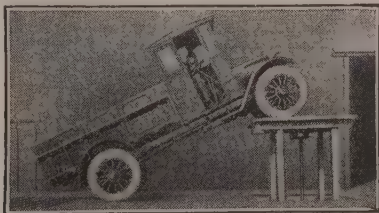
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Chatham and Phoenix National Bank, New York
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When You Order
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you know beforehand that you will get thoroughly dependable service in truck dumping—there is no question about it—Trapp Dumps are in successful use in hundreds of elevators.

Don't buy an experiment—a dumping outfit that is new, and hasn't been tried out under all possible conditions—the experiment costs too much. Buy either a Trapp Auto-Truck Dump, or

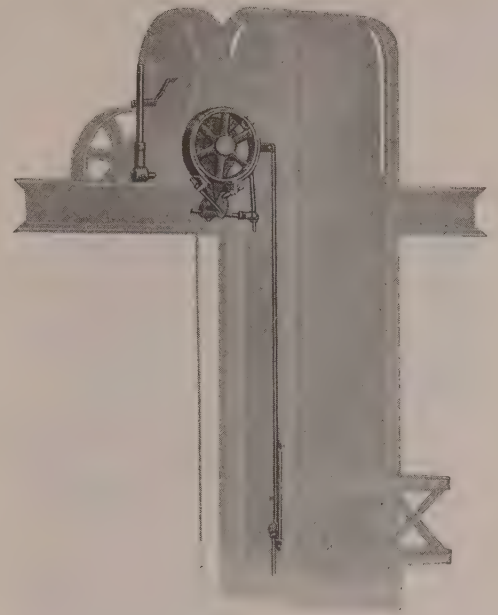


our Combination Truck and Wagon Dump; and you will be sure always of having entirely satisfactory service.

Trapp Dumps will handle trucks of all makes, regardless of length or weight. You will never have any accidents caused by your Trapp Dump—no possible danger to your patrons or their trucks—the Trapp Dump is perfectly safe. We don't use ball bearings or dangerous inclined platforms in connection with Trapp Dumps. **WRITE FOR THE DETAILS** about the Trapp special interlocking gear system; we will send circulars, list of installations in Line elevators, and reproductions of testimonial letters from men who are using Trapp Dumps.

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WITH
AUTOMATIC
SAFETY DEVICE

WITH the upper terminal automatic stop in operation there is no danger of being carried overhead and injured. The weight of the passenger after the top floor is reached automatically throws a lever, shutting off the power and applying the brake, thereby locking the belt and steps against movement in either direction.

The automatic stop mechanism furnished with the Nordyke & Marmon Company service elevator adds the vital feature of safety to the elevator's other excellent qualities of reliability and utility.

Send for Service Elevator Circular.

NORDYKE & MARMON COMPANY

Established 1851

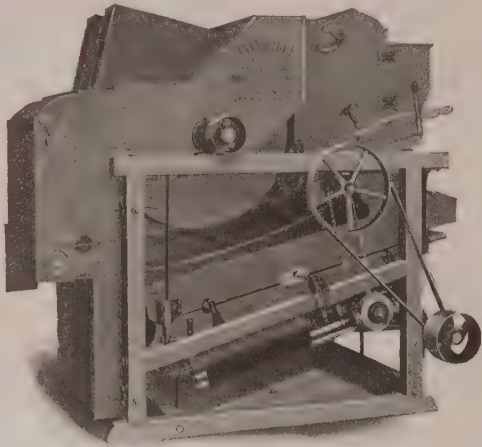
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AMERICA'S LEADING MILL BUILDERS

Don't Speculate—Buy Wisely

Measured by bushels of grain cleaned and the amount of Screenings removed, an INVINCIBLE Receiving Separator is absolutely indispensable. It is a wise investment.



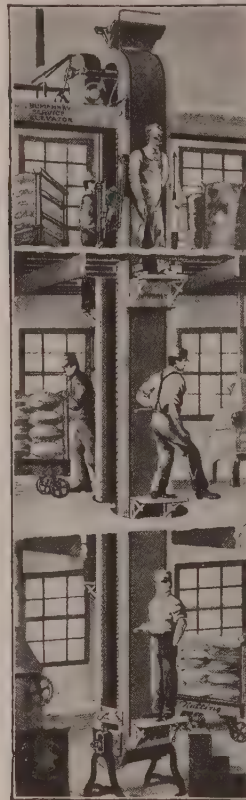
The INVINCIBLE Compound Shake Double Receiving Separator.

The Separator INVINCIBLE

In use in every country on the face of the globe where grain is used.

Sixteen sizes—Fifty to five-thousand bushels hourly capacity.

Invincible Grain Cleaner Company
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Humphrey
ELEVATOR

The wide use of the Humphrey for 34 years is due to its big, outstanding advantages and unquestioned reliability.

The Humphrey Electric Silent Chain Drive requires practically no attention, operates quietly, lasts longer and uses less power than belts or gears.

Patented Automatic Stop Device eliminates accidents. It stops itself after

a man or a sack of flour goes above the top floor.

Easily installed by any millwright or mechanic in your plant.

Genuine Humphreys are made only by the Humphrey Elevator Co.

Write for full information.

Humphrey Elevator Co., 1131 Division St. W., Faribault, Minn.

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The Type "P" is Built to Weigh Heavily Loaded Auto Trucks



Weighing auto trucks on a wagon scale is dangerous and the results are frequently inaccurate. The bearings are not built to weigh auto trucks which carry up to 90% of the load on the rear axle. Type "P" scale bearings will each sustain 50% of the full capacity of the scale or 100% on each end. This means safety, accurate weights and long service.

Fairbanks, Morse & Co.
INCORPORATED CHICAGO

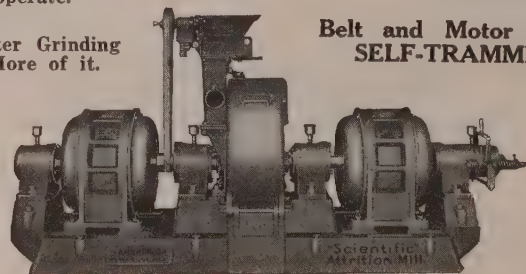
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Cost Less per Hour to operate.

Do Better Grinding and More of it.

Belt and Motor Driven
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The Bauer Motor-Driven Ball-Bearing Attrition Mill

Accessible Interior. Special Plates furnished for every class of grinding. Time and Labor-Saving Devices not found on other mills.

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Of all fire losses on mills and elevators occur at night? Careful inspection of property before locking up is essential to fire prevention.

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Flexible and Bin Spouting.
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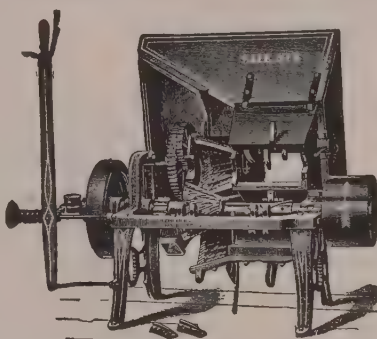
Will save you Dollars and Trouble. Kankakee Spout Patch made to fit 6-7-8-9-10 inch spout. Made of 16-gauge hard steel, 12" long.

\$9.00 Per Dozen

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Make Feed Grinding More Profitable!



Bowsher's "Combination"
Mills do this

Because their large capacity, cone-shaped grinders and positive self ear feeders are properly designed to direct every ounce of power energy to the actual reduction of the grain.

Crush and Grind ear corn, husked or unhusked, alone or mixed with any kind of small grain in any desired proportion. Reduce the material to any fineness desired for feeding purposes.

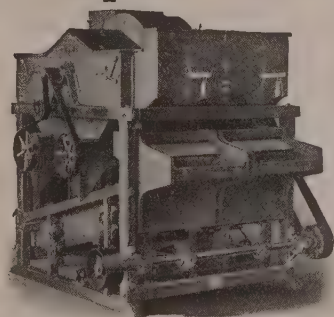
11 Sizes, 2 to 25 H.P.
Sold with or without Sacking Elevator.

Mill opens like this in six minutes.

The N. P. Bowsher Co., South Bend, Ind.

For unlimited profits and for greatest efficiency in your mill or elevator, install

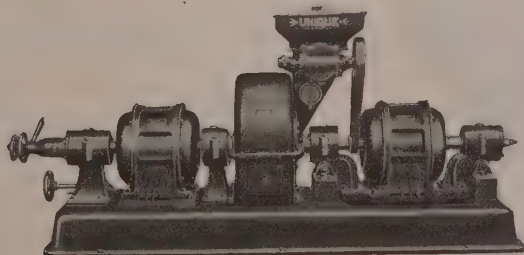
Unique Milling Machinery



RECEIVING SEPARATOR

This machine will save its cost in a short time by removing sticks, straws, stones, fine seeds, sand, etc., from the grain as it is brought to your plant, thereby saving the price you would be paying for good, clean grain.

All modern improvements and conveniences are incorporated in this UNIQUE Machine and it will operate efficiently at all times. Operator can conveniently change sieves to suit the product being received.



Motor Driven. Belt Driven if Preferred.

Here is a machine representing the most efficient feed grinder on the market. Its numerous patented improvements assure the owner of MORE and BETTER grinding CHEAPER. A UNIQUE Mill will prove a valuable asset to your equipment.

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The UNIQUE Flour, Feed and Cereal Mill Builders.

A PROFITABLE INVESTMENT

Every elevator owner is operating to disadvantage who is trying to get along without a

Cyclone Dust Collector

Do not delay longer but write today for full particulars on the installation of our system.



CYCLONE BLOW PIPE CO.

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Complete new systems installed on modern plans and guaranteed. Old systems remodeled on modern lines on most economical plans. Supplementary systems added where present systems are outgrown. Defective systems corrected and put in proper working order.

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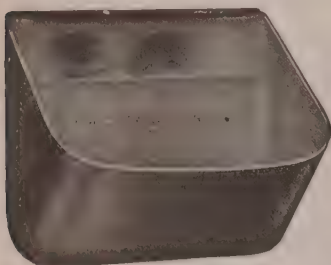
is often the means of
extra profits to those who

BUY FROM

WHITE GRAIN CO.

DULUTH, MINN.

Hay—and—Grain



Elevator Buckets

Salem Buckets fill easily, carry maximum load, and empty clean. Notice rounded corners and general shape. The best elevator bucket for all kinds of grain and mill products.

Made in more sizes and gauges than any other bucket on the market. We fill orders promptly from the large stock which we carry.

H. W. Caldwell & Son Co.

LINK-BELT COMPANY, OWNER
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Screw Conveyors



Unquestionably our Helicoid (continuous flight conveyor) is the best screw conveyor made. We are the originators of and fully equipped to make the sectional flight conveyor also, but advise customers to use Helicoid, because it is better balanced and more durable than any other screw conveyor, and renders more satisfactory service.

Helicoid conveyor is well adapted to the handling of grain and all milling products; cotton seed and cotton seed products, fertilizers, sugar, starch, rice, coal, ashes, cement, concrete, phosphate, sawdust and many other articles.

HELICOID COSTS NO MORE THAN OTHER CONVEYORS

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Furnish Plans, Estimates and Build
COUNTRY GRAIN ELEVATORS

Our long experience as a builder of elevators insures you an up-to-date house. Write today.

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All Kinds of Sampling
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Elevator Machinery and Supplies Flour and Feed Mill Machinery

PULLEYS, SHAFTING, GENERAL POWER TRANSMISSION MACHINERY, ROLL GRINDING AND CORRUGATING. LARGEST FACTORY AND STOCK IN THE WEST.

GREAT WESTERN MFG. CO.

General Offices and Works:
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Warehouse and Sales Room:
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KANSAS CITY, MO.



The Day Dust Collecting System

is installed in the new, large Northern Central Elevator at Canton, Baltimore, Md. We have just equipped the three Rock Island elevators at Kansas City, Mo., with complete systems.

For catalog write

THE DAY COMPANY, Minneapolis, Minn.

EAGLE "MIKADO"



PENCIL No. 174



Regular Length, 7 inches

For Sale at your Dealer.

Conceded to be the Finest Pencil made for general use.

Made in five grades

EAGLE PENCIL COMPANY, NEW YORK

Ontario House Provides Constant Service

Plant of the Mutual Elevator Company at Fort William Installed Morse Chain Drives to Insure Uninterrupted Flow of Grain During War Period

THE grain storage situation in Canada in 1916 was in a critical situation. The crop of the year before had been of record size and congestion at terminals was the rule rather than the exception. The Canadian Pacific Railroad handled more than twice as much grain as ever before and the need for additional storage and handling facilities was urgent. To be sure the prospects for the 1916 crop, later realized, were not bright, but there were no indications of a speedy termination of the war and the insistent cry for foodstuffs from Europe was being answered by ever increasing acreage in Canada and this country, and thousands of acres of virgin prairie broken and seeded to wheat.

In this crisis the Mutual Elevator Company of Fort Williams, Ontario, selected a site on the Kaministiquia River with dockage for direct shipment by lake steamers, and with spur tracks having direct connection with the Canadian Pacific and the Canadian National Railways. This location was one which provided for the greatest dispatch possible in grain handling and which eliminated switching and transfer charges. The great bulk of grain from the Head of the Lakes moves Europe-ward by boat. In war time when every agency was straining its utmost, not to get business, but to handle the business that came to it, competition did not play its usual part in the plans and activities of grain handling firms, but the Mutual Company looked beyond the war, and in peace times, under the sharp competitive conditions that prevail at all terminal markets, advantages such as this location gave, are of great importance. This is no less true at the Head

of the Lakes than at other markets, for the new elevator planned by the Mutual Elevator Company and others in the fall of 1916, brought the total grain storage capacity of Fort William and Port Arthur to 47,085,000 bushels, with 900,000 additional bushels in hospital elevators.

The Mutual Company was insistent upon speed in the erection of its new house, so the contract was given to the Fegles Construction Company, Ltd., of Fort William, to do the work. On account of the time limit the working house was built of wood, ironclad, while the storage tanks are of concrete. The work house is so carefully designed and constructed that it has all the rigidity of a concrete house, in spite of the fact that it is said to be the tallest house of its type in existence. It is 172 feet high and 42 by 56 feet on the ground plan with a capacity 125,000 bushels. The concrete tanks have a 400,000-bushel storage capacity and in workhouse and storage annex there are 40 bins, adequate for complete separation of grades and for handling convenience. The house can receive 52 cars of grains in a 10-hour day, and discharge 200,000 bushels for shipment

at the same time without interfering with receipts.

In the equipment of the head-house is included seven Monitor and Richardson Grain Cleaners which can handle 5 cars of grain an hour; a 500-bushel Ellis Grain Drier; automatic shovels; three 2,000-bushel hopper scales; and 10 belt conveyors (1,600 feet), made by the Gutta Percha & Rubber Company. Fire prevention is provided for with a dust collecting system; a stand pipe and hose on each floor; and fire doors between the various parts of the house. There is an employees elevator and many other conveniences and labor savers for the operators and workers.

When the elevator was built there was one dominant factor in the mind of the Mutual Company. Speed! Speed in the construction of the elevator, and speed of operation when completed. This idea was emphasized with the contractors, and the most minute scrutiny was made of all the factors which would enter into the equation.

electrical equipment, the expense, in most communities, compared with other forms of power, is low, particularly on the day load which is about all most elevators use. Electricity, then, was accepted as the motive power, but there remained the drive.

The installation of a perfect power plant is only the beginning of the solution of the power problem. The transmission is as vital as the power itself. Faulty transmission may be as wasteful of energy, as reckless in its consumption of time and patience, and as expensive of material as a poor power plant. Unless power is properly transmitted it is as useless as an unbridled horse on the plains. Its efficiency is dissipated in useless effort and its economies are discounted before it delivers a pound of energy to the machines it drives.

Modern efficiency engineers and accountants are insisting on the writing off a certain percentage of industrial plant assets to obsolescence. That means taking care of the expense when you wake up to

the fact that your equipment is no good and you have to replace it with new and more economical machines. It is a part of the depreciation charge, and too often the most important part. In the transmission equipment of the Mutual plant the builders selected a transmission upon which no obsolescence charge would have to be written off. Eighteen out of the 25 motors in the elevator are equipped with Morse Silent Chain Drives. The construction of the plant made it necessary to use ropes on the elevator head drives, otherwise, no doubt, these would have been Morse equipped also. The motors develop about 500 horsepower so that the transmission is required to carry a vast amount of energy during

the year and depreciation is a factor which cannot be overlooked. In power equipment or transmission equipment the depreciation is often equal to the operating cost when a wrong selection is made. With Morse Silent Chain Drives, however, the depreciation is reduced to a negligible amount for there is no slip or creep to wear out transmission, no side scrape to destroy the belt as well as to render the plant an unwholesome fire or explosion risk, and no destruction of fibre or decrease of efficiency through atmospheric changes. So far as an obsolescent charge is concerned, there need be none, for a silent chain drive has a life as great as that of the plant itself, and its efficiency has been proven through years of service so that it is sure that there is no transmission which could replace it with an increase of efficiency.

For all transmission service the Silent Chain Drive has given the maximum of service for the minimum of cost and more and more is becoming standardized by many of the leading construction engineers in their equipment specifications for all elevators and other plants that require unailing transmission of power.—Advertisement.



MUTUAL ELEVATOR AT FORT WILLIAM, ONTARIO

Among the first to be considered was power, and without hesitation or argument electricity was decided upon. It is not so long ago that such a decision would have been considered the height of folly, for only in recent years have electric power plants and electric motors been sufficiently dependable to answer the requirements where speed is of importance, for speed in industry is not a matter of high velocity for short intervals, but the unvarying, constant application of power whenever and wherever it is needed. The hare of the fable could no more win an industrial race than he could against the tortoise. Perhaps Aesop, when he wrote the fable, had in mind a Twentieth Century grain elevator in war time. During the war the fuel situation had to be reckoned with and it was easier for public utility companies to get it than for private industries, even one as essential as a grain elevator. In addition to the improvement in

ENGINEERS PLANNING POWER TRANSMISSIONS

Secure Data and Estimates of "MORSE" DRIVES. SAVE Construction, Space, Light, Fuel. Producing More With Less.

MORSE CHAIN CO.

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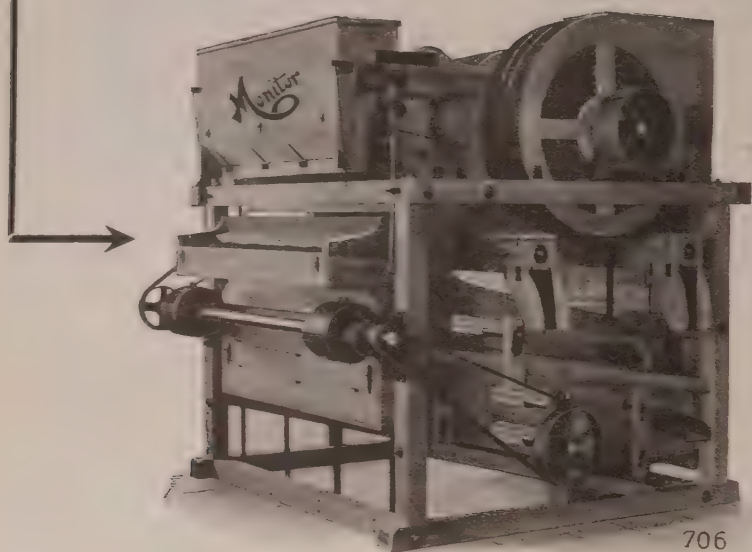
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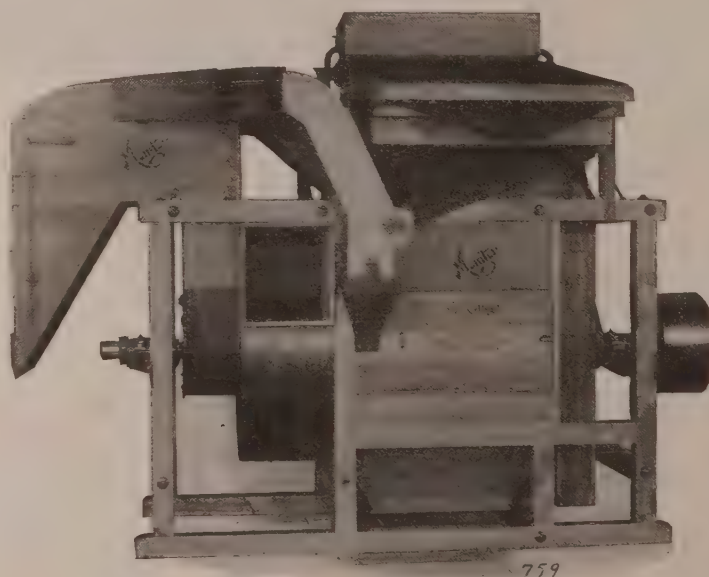
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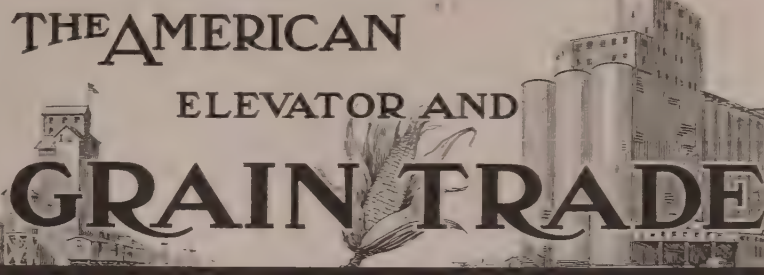
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Official paper of the Grain Dealers' National Association and of the Illinois Grain Dealers' Association.

Established in 1882.



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NO. 3

Buffalo Elevator for Feed Grains

Ralston Purina Plant at Buffalo Has Efficient Elevator to Care for Grain Requirements of Its Feed Plant

WHEN the plant of the Husted Milling & Grain Company of Buffalo was destroyed by a terrific dust explosion and fire in 1913, the grain world was startled into an investigation of grain dust explosion which was later taken over by the Government and continues to the present time. Many progressive movements are started only after a great disaster, and ultimately great good will come from this investigation. At the time of the Husted tragedy, however, there was no thought but of the appalling loss of life and property. The entire milling plant was destroyed and also the head house of the Nickel Plate Elevator, operated by the company, and adjoining the plant. The elevator bins, which were built by the Macdonald Engineering Company, were preserved for the most part and are still in use as a part of the rejuvenated plant. The property was acquired by the Ralston Purina Company of St. Louis, Mo., and the A. E. Baxter Engineering Company of Buffalo designed a new head house for the elevator to replace the one destroyed, and at the same time a new mill was built. At the present time the plant consists of elevator, feed mill and mixing plant of about 400 tons capacity per day; one warehouse of 60 cars capacity and another holding 50 cars of feed, both of brick construction with concrete floors; a drier house with a capacity of 1,500 bushels per hour with a storage over the head driers for two cars of grain and automatic scales before and after drying; a seven-story screenings grinding plant between the elevator tanks and workinghouse, in which are all the machines for grading, grinding and separating screenings and other by-products. The plant is thoroughly modern in every detail and as nearly fire-proof and explosion-proof as engineering science and non-inflammable material can make possible.

There is little likelihood of a repetition of the catastrophe which overwhelmed the Husted plant, particularly as scrupulous cleanliness is observed in every department.

The elevator consists of a head house and the grain storage tanks. The plant is of reinforced concrete construction, and is well planned in its architectural features and efficient in its layout and operation. The head-house has 36 bins with a total capacity of 300,000 bushels and there are 18 circular storage bins, 19 feet inside diameter and 70 feet high, and 24 interstice bins of the

same height. The capacity of these tanks is 400,000 bushels. The total storage capacity of the house, therefore, is 700,000 bushels.

The elevator is on the Nickel Plate and the Erie Railroads and the track shed covers four tracks which serve the house. There are two car dumps on each track and two loading spouts, each serving either of two tracks. The receiving capacity of the house is 100,000 bushels in 12 hours

feed, is sent to the drier house which is equipped with a 1,200-bushel Ellis Drier.

Connecting the head-house and the storage tanks is a gallery with two 36-inch conveyor belts each equipped with a style "B" Weller Tripper. The Weller Manufacturing Company furnished all of the conveying and transmission machinery in the house, including the power shovels and much of the steel work. The conveying equipment is all ball bearing, and requires a minimum of power. Only the highest class of materials is employed.

From storage the grain is carried by two 60-inch conveyors to the boots of the four shipping legs which, taken, are equipped with 11x7-inch chaps. It is then sent to the shipping bins or to the grinding plant where it disappears as whole grain and thereafter is seen only as a part of one or other of the well known Ralston Purina feeds. In fact some of the grinding is done in the elevator itself; there are four attrition mills of Monarch and Bauer Bros. make. The elevator ground meal is used for a special line of feed and is carried to the mixing house in that condition.

The house is operated by electric power. Sixteen motors having a total of 150 horsepower drive the entire equipment. The transmission is by gear shaft chain drive and by belt. There is a 75-horsepower water tube boiler for furnishing steam and the plant is protected against fire by a standpipe with condensers on every floor.

This plant answers the question which is occasionally put to us: Is the manufactured feed business a permanent enough basis to warrant the investment of capital in a new plant? While the feed business in the past year has suffered like most other industries, it is no longer in its experimental stages nor is it strictly seasonal. For many feeders, have

and the shipping capacity 100,000 bushels in 10 hours.

The four receiving legs elevate the grain to the two 2,000-bushel Howe Scales, or to the separators. There are four Monitor Separators with a total capacity of 12,000 bushels per hour. The belts on the receiving legs are equipped with 18x7-inch buckets. The grain is carried from the receiving pits to the elevator boots by conveyors. Four Clark Automatic Power Shovels unload the cars into the pits.

The grain that is received too damp to put into

come to regard prepared feeds as indispensable adjuncts of pasturage and silage. Dairymen, poultrymen, and even cattle and hog feeders recognize the value of scientifically balanced rations, specially prepared for various purposes and immediately available for their needs. Even during the past season of abnormally low grain prices there was a reduced but steady consumption of feeds. The business undoubtedly is not only stable and permanent, but is really in its infancy as the preliminary educational work is only beginning to make itself felt, and will be cumulative in its effect, so that



RALSTON PURINA ELEVATOR AT BUFFALO, N. Y.

the future of the industry is about as promising as it could well be. Dairymen know that more milk and not cheap feed is the secret of success.

In its Buffalo plant the Ralston Purina Company has shown its faith in the future. The plant is wonderfully complete in its milling and mixing departments as it is efficient in grain handling. The elevator is planned to eliminate hand labor so far as possible. Its power control is located in a board conveniently arranged and readily accessible from the work floor, and all its working parts are arranged for ease in their supervision.

Buffalo is a natural distributing point for feeds as it is within a short run of some of the best developed dairy communities in the country. Its position at the foot of the lakes reduces freight rates to a minimum and in the near future the city will be one of the greatest milling centers for both flour and feed instead of being a mere transfer point as it has been so largely in the past. The Ralston company is well equipped to take care of its large eastern business, as it is to satisfy the Middle West from its St. Louis plant, and in both sections the checkered sacks are found on more and more farms and its feeds are becoming staple equipment of thousands of feeders.

THAT POOL IN THE NORTHWEST

One of the minor features of the past month in grain circles has been the widespread interest created by the announcement in Spokane that members of the Northwest Wheat Growers' Association received an average price of only \$1.04 to \$1.06 for the 3,000,000 bushels consigned to the Association last year, while farmers outside the pool in the same district received an average of \$1.53 a bushel.

The Vollmer Clearwater Company of Lewiston, Idaho, which operates as a private concern in practically the identical territory embraced by the association, has issued a statement asserting that they paid nearly 50 cents a bushel more to farmers than the Association realized for their members in the same district. "It has been announced," said the statement, "that the members of the Northwest Wheat Growers Association received an average of \$1.04 to \$1.06 for about 3,000,000 bushels of wheat consigned to the Association.

"We bought during the same season about 1,500,000 bushels of wheat from the farmers in this territory and delivered it to warehouses. On this amount the farmers were paid by us an average net price of \$1.53 a bushel. The wheat we handled realized nearly 50 cents a bushel over the Association price. This is nearly 50 per cent more than farmers obtained through the pool. Our books are open to support our statement. Farmers who were in the pool are marketing through regular channels this year. That is the best proof."

"Perhaps that company guessed better than we did," said George C. Jewett, general manager of the Northwest Wheat Growers Association, and who is also a director of the U. S. Grain Growers, Inc. "Last season was an abnormal one and favorable for pooling, with a declining market prevailing. We believe our prices were the best going at the time of the sale."

To controvert Mr. Jewett's statement, we have the assertion of D. M. McCance, a prominent Washington grain man. "Buyers say there was only one time during the last season when wheat was as low as \$1.02 to the farmer," said Mr. McCance. "This was during part of last April. It seems impossible that the Association could have disposed of all the wheat in the short time that it was at its very lowest point." Investigation shows that an average price of \$1.42 to \$1.60 net was paid the farmers by grain dealers, mills and farmers' warehouse companies for the crop of 1920 and 1921. So far inquiry has failed to find a single station in Washington where the average price paid farmers was less than \$1.37 for last year's crop.

"Records show farmers received from 40 to 50 cents a bushel less on the average for wheat turned to the Association than for wheat sold direct through the usual channels. This difference on 3,000,000 bushels of wheat would far exceed \$1,000,

000 which the farmers of the Inland Empire evidently lost in a year through the Association. Grain dealers and warehouse men figure cost of buying, selling, freight, warehouse and interest at 22 cents a bushel. Statements of the Association show their cost of these items to be 30 cents a bushel."

The latest reports have it that the Association members will market their grain through the usual grain exchange channels this year. They have apparently gone cold on the proposition of another pool as one of the nuclei of the national pool being urged by the U. S. Grain Growers, Inc.

COST OF RAISING WHEAT

BY P. S. GOODMAN

The Department of Agriculture has made an exhaustive inquiry as to the cost of producing wheat in the Spring and Winter wheat regions, which is interesting but not conclusive, as the results ascertained were confined to three counties in the Dakotas, Minnesota, Nebraska, Missouri and Kansas. While the counties are typical for those states, one cannot make an extension over the entire wheat belt; there is no doubt of a higher cost in the eastern wheat belt, and probably lower in some other sections of the country.

Last March, in the AMERICAN ELEVATOR AND GRAIN TRADE, I made an estimate for the whole country on the cost of producing wheat, corn and oats, the estimate being an extension of the costs ascertained over the entire country in 1909, and the basis being the price of labor, and value of farm lands, as reported annually by the correspondents of the Bureau of Crop Estimates.

In the extension I also included the cost of corn and oats in Iowa and wheat in Kansas. The three counties of the last named state used by the economists of the Department in the recent estimate, permits of a comparison with the table for Kansas wheat for the year taken, which was 1919.

The variation on the average of the three counties is so slight as to confirm the method I used. The comparison of the ascertained results by counties and the average of the three, with the extension made by me, follow:

COST OF PRODUCING WHEAT IN THREE KANSAS COUNTIES

	Ford	Pawnee	McPherson	Goodman's	
	County	County	County	Average	Extension
Fertilizer	\$0.08	\$0.10	\$0.39	\$0.18	\$0.12
Preparation, planting	3.69	2.60	5.22	3.84	6.01
Seed	1.79	2.19	2.36	2.11	3.03
Harvesting	6.40	4.67	6.46	5.84	4.08
Threshing, marketing	4.33	3.99	4.81	4.98	3.90
Miscellaneous	1.30	1.41	.96	1.22	1.22
Total	\$17.59	\$14.96	\$20.20	\$17.58	\$18.36
Overhead	1.75	1.44	2.03	1.74	...
Total	\$19.34	\$16.40	\$22.23	\$19.32	\$18.36
By-products, credit	0.71	1.29	.68	.89	.93
Balance, net cost	\$18.63	\$15.11	\$21.55	\$18.53	\$17.43
Bushels	13.3	13.9	12.7	13.3	13.8
Cost per bushel	1.40	1.09	1.69	1.39	1.26
Value per bu.	2.85	2.85	2.85	2.85	2.85
Profit per bu.	1.45	1.76	1.16	1.46	1.59
Profit per acre.	19.30	24.46	14.73	19.60	21.94
Land value per acre	\$55.00	87.00	134.00	\$92.00	60.50
Per cent on land					
renters	35.1	28.1	11.0	24.7	34.8
Land rental	6.14	7.77	8.44	7.45	...
Net profit to renter per acre	13.16	16.69	6.29	12.05	...

* Census reports the average value of all Kansas farm lands, as of Jan. 1, 1920, at \$62.34.

It will be noticed that the Government authorities add to the cost the overhead, which is the depreciation on the farm for repairs, roads, fences and incidentals, which the authorities estimate at 12 per cent of the labor costs, and this is applied to the wheat. Taking the same calculation, the overhead in the extension of the 1909 estimate for the same year would be \$1.94 an acre, making the total cost \$20.30, or one dollar an acre over the recent estimated average cost of the three counties.

The only radical difference in the two sets of figures is the value of the land, which averages

\$92 an acre for the three counties. The state average in 1919 by the correspondents of the Bureau of Estimates was \$60.50. The census report as of January 1, 1920, gives the average cost of Kansas farm lands, including improvements, as \$62.34. Either there has been an excessive valuation made by the economists, or the lands in two of these counties are well above the state average. Ford County, being in the western group, shows an average less than the state.

The interesting feature of the reports and the census valuation of lands in Kansas give substantial confirmation to my method of extension. My critics who quarreled over my costs as being too low, may be surprised at the showing for this state with the average cost in three typical wheat counties as being under the extended estimate.

PROSPECTS FOR WORLD'S WHEAT SUPPLY

Prospects for the world's wheat supply, while not so satisfactory as was expected during the first part of the current season, show at the present time no cause for serious alarm. Estimates of the quantity of wheat harvested in 20 countries, including the United States, for 1921, total 2,461,430,000 bushels, compared with 2,384,143,000 bushels harvested last year, according to data compiled by the Bureau of Markets and Crop Estimates, United States Department of Agriculture.

The 20 countries included in this estimate are the United States, Canada, Argentina, Chile, Uruguay, Belgium, Bulgaria, Finland, France, Greece, Hungary, Italy, Spain, British India, Japan, Algeria, Tunis, Union of South Africa, Australia, and New Zealand. These countries produced approximately 68 per cent of the known wheat crop of the world during the years 1903-13, according to the annual average production records of the Bureau.

Although the long-sustained drought throughout the greater part of the Northern Hemisphere was a serious menace to the various crops in many countries, the fall-sown wheat has not been affected adversely so much as was at first supposed. On the contrary, the fall-sown wheat managed to obtain a firm hold on the soil and a fairly vigorous growth before the beginning of the drought.

Nearly all of northern and central Europe will have larger wheat crops this year than last, according to the last estimates made by the Bureau, Belgium and Greece being the only countries in which smaller crops are expected.

Outside of Europe, British India was most seriously affected by the drought. The dryness and the hot winds that have prevailed throughout most of the growing season have resulted in the very low yield of 250,469,000 bushels of wheat or about 50,000,000 bushels less than the quantity normally consumed in that country. With the rice crop also seriously affected, India is expected to import wheat this year instead of exporting it. In an average year before the World War, India exported over 50,000,000 bushels of wheat.

In Canada the total yield of Spring wheat is estimated at 273,020,000 bushels, of which 264,137,000 bushels were grown in Saskatchewan, Manitoba, and Alberta. Fall wheat, grown almost exclusively in Ontario and Alberta, was estimated at 15,473,000 bushels. The total wheat yield of Canada for 1921 is therefore 288,493,000 bushels, compared with 263,189,000 bushels last year.

A very unsatisfactory feature in the present international situation is the hopeless condition of the Russian crops. Unofficial reports state that during last autumn and the spring of this year only a very small area was sown to the various crops, resulting in a failure to produce sufficient food for the country's needs. It is also reported unofficially that a considerable amount of wheat will yet be imported by Russia this year. But up to the present time the amount of wheat, as well as other foodstuffs, which will be imported is conjectural, and the Bureau of Markets and Crop Estimates is unable to make a definite statement concerning it.

In northern Africa, the wheat crop was generally larger than last year. In Algeria, threshing results

show a better yield than was expected earlier in the season. In Tunis, bad weather reduced the yields somewhat from those expected earlier, while in Morocco the crop was generally reported as satisfactory. According to estimates published by the International Institute of Agriculture at Rome, these three countries are expected to produce, for 1921, a yield of 66,138,000 bushels of wheat, compared with 36,743,000 bushels in 1920.

RECEIVING LIGHTERED GRAIN AT TIDEWATER

When the Corn Products Refining Company erected its Edgewater, N. J., plant in 1901, Webster conveying and elevating equipment was used throughout, among the several units being a wooden marine leg of the standard type, which was housed in a non-fireproof tower. This marine leg gave very satisfactory service for over 17 years, until it was destroyed by fire which consumed the entire dock. When the Edgewater plant was rebuilt, it was decided to use an air suction system in place of the marine leg as this system was considered to be less expensive in equipment cost. However, not long after installation, it was demonstrated that the air suction system could deliver but one-sixth of the bushel capacity formerly obtained from the old wooden marine leg and even this reduced service was secured only with a consumption of several times as much electrical power, thus proving so unsatisfactory that it was soon replaced by a Webster Tidewater Marine Leg.

The newly installed steel marine leg which was recently completed, is of the boom and cross-head type and has a rated capacity of 5,000 bushels of corn per hour, but when it is necessary to do so the capacity can be increased to a maximum of 7,000 bushels per hour. The leg proper is 70 feet, center to center, and is equipped with Buffalo buckets 16x7x7 inches, spaced 13-inch center on an 18-inch rubber belt made by the Diamond Rubber Company.

After being taken up by the marine leg, the corn is discharged into a telescopic spout and de-

livered to a garner, the latter being quite similar to a vertical spout, but made from steel plates and angles on three sides, the fourth or front side being fitted with guides for a rubber belt and reinforced with steel slats. From this garner the corn is dropped by means of gravity into another garner which has a capacity of 750 bushels, and which is placed immediately over the scale hopper, the latter having a capacity of 250 bushels or only one-third the capacity of the garner immediately above it. Both the garner and the scale hopper are fitted

with 24-inch rotary valves, which are operated by levers so placed at the scale beam that the operator may open and close each valve without changing his position. When the corn has been weighed, it is dropped into the lower garner, which also has a capacity of 750 bushels, or three times the capacity of the scale hopper above it. After the corn has passed through the three garners and the scale hopper, it has reached the dock level which

is about six feet above high water, and it is necessary to elevate it to a belt conveyor which will carry it from the marine tower to the corn storage house. This is accomplished by a loftier leg which is 41 feet center to center, and equipped with 18x7x7-inch Buffalo buckets mounted on a 20-inch rubber belt.

The marine leg casing is constructed entirely of steel plates, and angles, and, with complete fittings weighs 24,000 pounds, this entire weight being suspended from the boom, at a radius of 20 feet from the pivot point at which place it is connected to

puller hoist is provided for the purpose of pulling the marine leg in or out of its tower. The entire marine leg mechanism is driven by a main counter-shaft, which in turn, is driven by a 50 horsepower motor. All drives are rubber belt, with the exception of the marine leg drive, the latter consisting of five one-inch ropes, as this type of drive is best suited to a variety of working positions. A Webster clean-up shovel of the double-drum semi-auto-



PLANT OF THE CORN PRODUCTS REFINING COMPANY, EDGEWATER, N. J.

matic type, and equipped with wooden scoops was furnished to clean up the boat holds. This machine is operated by ropes which are placed on the deck of the boat being unloaded. By these scoops much time is saved in finishing a cargo.

The marine leg tower is made entirely of steel, the roof and sides being completely enclosed in galvanized corrugated steel with steel perkins and girts. It consists of seven floors and is 21 feet by 27 feet and rises 125 feet above mean low water. The steel work for this tower as well as all the operating mechanism, transmission machinery, garners, buckets and ropes were furnished by The Webster Manufacturing Company and fabricated in its shops. More grain is expected to be received by boat this year than ever before.

WINTER WHEAT TRENDS NORTH

The Winter wheat area has had a decided northward movement ever since the introduction of hardy varieties from southeastern Europe. Iowa, Nebraska, Colorado, Utah, Idaho, Montana, Oregon and Washington now produce both Spring and Winter wheats. In Nebraska, Winter wheat has become dominant and year by year adds to the territory where Winter wheat is now grown. In Iowa there is a transition zone between the Winter wheat district and the Spring wheat district, and in this zone both Spring and Winter wheats are grown. The same is true of other states; moreover, in some of the states named above Winter and Spring wheats are grown almost indiscriminately.

The reasons for the movement of Winter wheat northward are the generally larger yields of Winter wheat, its earlier maturity, thus enabling it to escape hail, hot winds and plant disease like rust, its greater resistance to drought, and finally the better division of the farmer's labors due to fall seeding and early harvesting. The average yields in Iowa and Minnesota show an advantage of 4.2 and 3.1 bushels respectively in favor of Winter wheat over Spring wheat. For the reasons given, the Agricultural Department rather favors the rapid extension of the Winter wheat area northward, making use of the hardier strains. But it cautions against sowing large acreages of Winter wheat in any locality where it has not been proven Winter wheat will succeed. By proceeding thus cautiously Spring wheat will not be displaced in localities where fall-sown wheat cannot be profitably grown.

But at that, as some farmers' elevator people in South Dakota are urging, in sowing Winter wheat the farmer does not lose his land even if



MARINE LEG AT CORN PRODUCTS PLANT

livered to a garner, the latter being quite similar to a vertical spout, but made from steel plates and angles on three sides, the fourth or front side being fitted with guides for a rubber belt and reinforced with steel slats. From this garner the corn is dropped by means of gravity into another garner which has a capacity of 750 bushels, and which is placed immediately over the scale hopper, the latter having a capacity of 250 bushels or only one-third the capacity of the garner immediately above it. Both the garner and the scale hopper are fitted

the lower end of the cross-head, having a vertical travel of 18 feet. Raising and lowering the boom and cross-head is accomplished by means of a Webster double drum marine leg hoist which is operated by means of ropes placed outside the tower, on the dock, thus permitting complete control by the operator at all times. Regardless of any angle at which it may be placed, the marine leg is always ready to operate, and requires no attention to spouts, drives, or other mechanism if it should be necessary to alter its position. A leg

the wheat is winter-killed. He can still put in corn or Spring wheat, or almost any other spring crop, and get a return from the soil.

PRESIDENT CLEMENT'S PLANT AT WACO, TEXAS

The great capacity which Ben E. Clement, president of the Grain Dealers National Association, has shown in handling the affairs of that organization during the past year and the grasp of fundamentals he has displayed in meeting the many problems that have arisen, could only be the result of a wide and comprehensive experience. As a matter of fact this experience extends over a period of 23 years and includes about every phase of the grain handling business from growing the grain to exporting it.

The Clement Grain Company of Waco, Texas, was organized nine years ago with a capital of \$100,000. B. E. Clement is president; J. M. Clement, vice-president; Frank W. Kellner, secretary-treasurer; and E. C. Sparks, traffic manager. The plant was built by the Burrell Engineering & Construction Company, and was started at the time of organization and has been added to and improved since. At the present time it consists of

wide radius. This, combined with the personality and business acumen of Mr. Clement, accounts for the marked success which the company has attained and the influence it has in the grain trade of the Southwest.

IMPORTANT FACTS IN THE HANDLING OF GRAIN CLAIMS

BY OWEN L. COON

1. Shortage claims must be filed in six months from the date the car is unloaded, or such claims are outlawed. Claims for delay in transit do NOT have to be filed within six months—any time within two years from the date the car is unloaded is sufficient.

2. Sue on your claims that are not paid, within two years from the date the car is unloaded. If you follow this simple rule, your claims will never be outlawed through suit not having been filed on them in the proper time limit. Disregard of such a rule may cause your claims to become outlawed and worthless.

3. Have your scales inspected every six months. If you do not have a good automatic hopper or track scale, get one installed as soon as possible. The loading weight on cars of grain over

be computed on the basis of the value of the grain at the time and place of destination. If you sell a car of corn at 60 cents before it is shipped and the car is wrecked and never delivered, the railroad is liable for the number of bushels loaded at the price at destination when the car should have arrived—whether it be 55 cents or 65 cents, the price at which you had it sold before you shipped it having nothing to do with the matter at all, should the value at destination when the car should have arrived be different.

9. Reasonable movement for a car of grain is 50 miles per day. As a general rule, when a car of grain is in transit twice the normal time, a claim for loss by delay is good. The grade of the grain may not have changed as a result of the delay, but if the price has dropped during the delay, a claim for any loss resulting thereby can be made good against the railroad. If the grade of the grain has been lowered as a result of the delay, a claim for loss due to that cause can also be filed. The amount of your claim is the difference between what the grain actually sold for, and what it would have sold for had it arrived on time and in good condition. In figuring such claims, it is customary to take the average of the market prices as shown by the market reporter for the day the grain actually arrived and when it should have arrived, the day when the car should have arrived being ascertained by allowing for a movement of 50 miles per day.

HOW THEY FEEL IN NEBRASKA

Through the medium of a communication to the editor of the *Nebraska State Journal* at Lincoln, a traveling man covering that state unburdens himself on the operations of solicitors for the U. S. Grain Growers, Inc. Incidentally he presents an objection to the plan from the standpoint of the smaller country elevator which we have not seen emphasized before. His letter says, in part:

I am a traveling man. Some of my customers are managers of farmers' elevators. Some of them carry side lines in which I am interested. Your esteemed journal contained a dispatch or interview about two weeks ago giving the names of farmers' elevators located in over 60 towns in Nebraska, with the statement that the state organizer of the U. S. Association claimed he had received signed contracts from all named in that list.

In the course of business in the past few days I have accidentally stumbled onto two elevators named in the list whose managers told me they had not signed. One stated positively that his house would not sign. He expressed no opinion about the merits of the U. S. Association plans, but said their elevators had not enough bins properly to care for the business of one set of customers, and they certainly would not contract in advance to enter a grab-bag game in which they would be more likely to draw a hornet than a gold watch.

He said the U. S. Association offers its members (if it ever gets any) the choice of several "methods" of having their grain handled. If a drive resulted in five or 10 members wanting their grain handled by different "methods," his elevator would not have half enough bins to care for the grain of those members, leaving his regular customers without a place to do business unless they went to his competitor. His board refused to sign a contract that would probably result in destroying the big end of their business for the sake of trying to care for the little end of it in a different and untold way.

Moreover, the solicitor told the board of directors that the present commission cost of handling wheat was \$45 a car, and when proof was presented that his figures were about double the actual cost, he replied that he was without personal experience, but that \$45 was the figure given at the "school" where the solicitors were coached.

The U. S. Association solicitors are bending every energy to sign up all elevators possible before any "grower contracts" are signed. In this way they hope to secure binding contracts with a penalty or damages clause (the manager showed me Sec. 14 of the elevator contract) from a host of co-operative elevators before there is any business offered, or any chance to test by actual experience whether there are any insurmountable difficulties that will make the contract a burden instead of a benefit to the company.

"(Signed) HIRAM HAND."

A NEW elevator has just been put into operation at Amsterdam, Netherlands. The house is of concrete, electrically operated, and has a working capacity of 6,600 bushels per hour. There is a sacking department, but most of the incoming grain is in bulk.



PLANT OF CLEMENT GRAIN COMPANY, WACO, TEXAS

a concrete and steel elevator of 60,000 bushels' capacity; a warehouse which will accommodate nearly 300,000 bushels of sacked grain or feed; a 1,500-ton hay shed and a corn mill with a daily capacity of 2,000 bags of meal and 2,000 bags of chop. Unfortunately, within the past month the plant was visited with a serious fire, which destroyed the corn plant, the hay barn with 150 tons of hay, and 15,000 bales of shucks. The loss was in the neighborhood of \$15,000, which was partly, but not completely, covered by insurance. The elevator and warehouse were saved.

The grain elevator has direct connections with the Missouri, Kansas & Texas Railroad and the Houston & Texas Central. The house has a receiving and shipping capacity of 25 cars a day, each, and is splendidly equipped for rapid intraplant handling.

Included in the equipment are two Eureka Cleaners with a joint capacity of 15,000 bushels; two 1,500-bushel corn shellers; two truck scales, one a Howe and the other a Fairbanks-Morse.

The house is operated by electricity furnished by a central power station in Waco. There are seven motors with an aggregate of 265 horsepower. Transmission in all cases is by belt drive. A very large volume of grain is handled, varying from two to five million bushels per year according to the Texas output. Waco is a rail center of considerable importance and the elevator is fortunately situated to receive grain from and distribute to a

wagon scales is disapproved by the Interstate Commerce Commission.

4. Get the difference between your loading weight and the outturn weight on the MAJORITY of your cars down below 300 pounds. You should be able to accomplish such a result if your scales are working as they should work.

5. Follow the advice in rule 4—and then file a claim on every car that shows a shortage of more than 500 pounds whether the car leaks or not—and a claim on every car no matter how small the shortage, if the car has a leak report or bad seal record at destination. The firm that files claims on such clear record cars, will reap the harvest eventually, if your scales are working correctly. Many railroads are today making settlements on such cars and the remainder will be doing so before many months elapse.

6. Place the actual weight on the bill of lading—not an estimated weight. This will be of untold assistance to your attorney should trial of a suit ever become necessary on any shortage claim.

7. Don't overload your cars. If you place the actual weight of the overloaded car on the bill of lading, your rights are then protected. If you overload a car, however, and put in the bill of lading a weight less than the actual weight in order to get the car accepted, you lose most of your rights to make the railroad reimburse you for any loss in transit.

8. The amount of your loss in any case is to

The North Western Elevator Explosion

A Review of the Investigation Conducted by the Bureau of Chemistry, U. S. Department of Agriculture—Examination of Possible Causes of the Explosion—Structural Changes Recommended

By DAVID J. PRICE and HYLTON R. BROWN*

THE explosion on March 19, 1921, in the North Western Elevator at South Chicago, Illinois, operated by the Armour Grain Company, has attracted more attention to the subject of Dust Explosion Prevention than any previous occurrence of this nature. As a result of the great damage to the elevator and the proportions of the explosion, numerous requests for information concerning this disaster have been received. These have come from all parts of the world where grain is milled or handled.

As a result of the explosion six men lost their lives and several others were injured. Parts of the plant were completely destroyed while other sections were damaged to such an extent that it was necessary to tear them down. The property loss was estimated at approximately \$3,000,000. While every effort was made to establish definitely the cause and point of origin of this explosion, the principal purpose of the investigation was to obtain data which would assist in preventing similar disasters in other industrial plants of the country, and also aid in designing and constructing mills and elevators so that the dust explosion hazard can be controlled if not entirely eliminated. This article reviews the result of the investigation by the Bureau of Chemistry of the United States Department of Agriculture and contains a number of recommendations based on the result of the investigation.

HISTORY AND ORGANIZATION

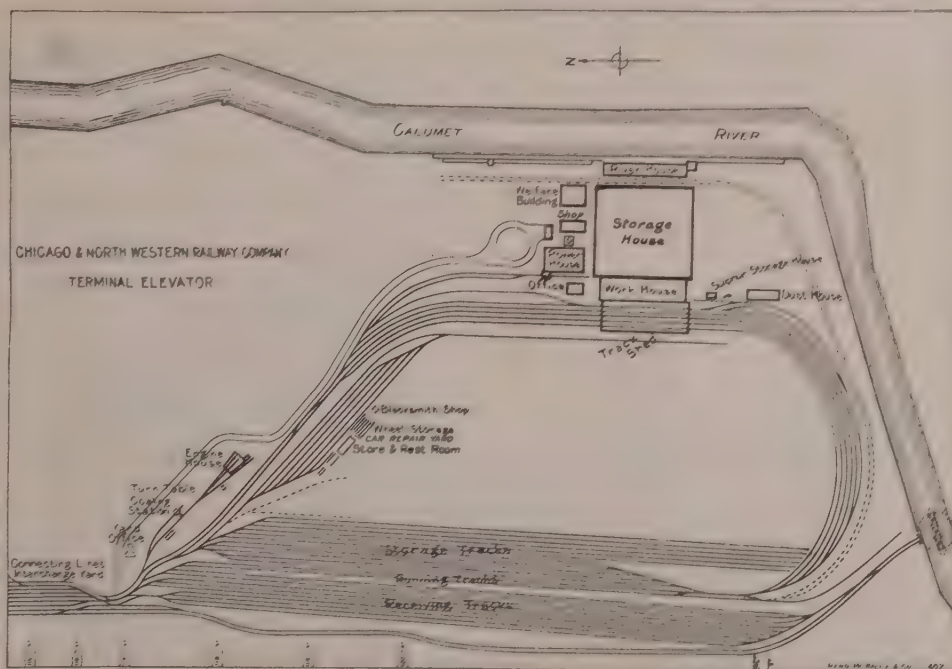
The North Western Elevator was built by the Chicago & North Western Railway Company to handle the large amount of grain shipped to Chicago over their lines. Plans were submitted by elevator engineering companies for a 10,000,000 bushel elevator, and in July, 1914, the railroad company began driving piles for the elevator foundation.

The plans submitted by the John S. Metcalf Company of Chicago and Montreal were accepted and construction work was started in March, 1916 by the Witherspoon-Englar Company of Chicago. The first section of the elevator with storage ca-

*Immediately after the terrific North Western Elevator explosion last March, the Government commenced a searching and complete investigation under the direction of D. J. Price, who needs no introduction to the grain trade. As Engineer in Charge of Development work for the Bureau of Chemistry, Mr. Price has conducted the investigations of previous dust explosions and his reports, published in our columns from time to time, have contributed much toward our scanty knowledge of the dust explosion hazard. This report, prepared by him with the collaboration of Hylton R. Brown, Assistant in Dust Explosion Prevention, is the most complete and comprehensive record of this nature ever given to the public.—E. D.

capacity of about 6,000,000 bushels was completed late in December, 1917. The Chicago & North Western Railway Company leased the elevator to the Armour Grain Company of Chicago and this firm started operating the plant January 2, 1918. Construction work on the uncompleted part of the storage section was started in July, 1919. This addition consisted of six rows of 13 tanks each on the north side of the storage section. The work on this addition was delayed and it was not completed until the fall of 1920. The completion of this new section of tanks increased the ca-

in the world. Although a large storage section was provided in the house, special attention was given to the installation of equipment for the rapid handling of large quantities of grain. Provision was made to unload 36 cars of grain an hour and shipping facilities were provided to load 48 cars an hour. The river house could receive grain from boats at the rate of 20,000 bushels an hour, or discharge to boats 467,000 bushels during the first hour, and continue after that at the rate of 257,000 bushels an hour. With the six elevator legs in the river house it was possible to



GROUND PLAN OF THE ELEVATOR

capacity of the house to 10,000,000 bushels as called for in the original plans and made it the largest grain elevator in the country.

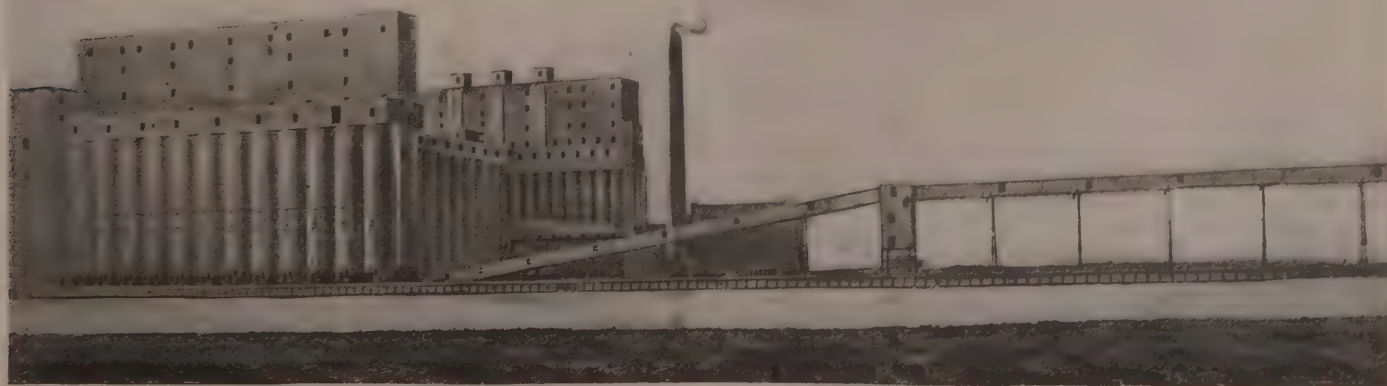
DESCRIPTION OF ELEVATOR AND EQUIPMENT

The North Western Elevator consisting of three sections, work house, storage section and river house, with a total capacity of approximately 10,000,000 bushels, was constructed of concrete and steel at a cost of about \$4,000,000. The plans of the John S. Metcalf Company were followed throughout and every effort made to incorporate all the latest improved ideas in grain handling facilities. It was considered the largest elevator

elevator, weigh, and deliver to boats 120,000 bushels an hour.

The equipment was designed to turn over all the grain in the elevator in 48 hours. The driers had a capacity of 9,000 bushels an hour, and oats could be bleached at the rate of 24,000 bushels an hour. The grain cleaners could handle 54,000 bushels an hour and the oat clippers 30,000 bushels an hour. The Chicago & North Western Railway Company provided storage tracks at the elevator with room for 1,450 cars. The power house was designed to develop 4,700 horsepower.

The accompanying ground plans shows the arrangement of the elevator with the various build-



THE NORTH WESTERN ELEVATOR AS IT APPEARED BEFORE THE ADDITION AT THE NORTH SIDE OF THE STORAGE SECTION WAS BUILT

ings and storage tracks at the terminal. A brief description of the different buildings or sections of the elevator will give some idea of the size and extent of this huge modern grain handling plant and indicate the tremendous force which must have been produced by the explosion in order to cause the extensive damage shown in the accompanying photographs and described in this report.

The work house was designed to be the most efficient grain handling unit in the country. This section of the elevator constructed of concrete and steel, was 77 feet wide by 287 feet long and extended 203 feet above the track level.

The track shed, with its receiving tracks on a level with the first floor of the work house, extended west from the work house and covered five tracks. Space was provided for 30 cars. The inner track was used only for shipping while the second track was equipped with six hoppers and could be used for shipping or receiving. The three outside tracks were used only for receiving and each was equipped with six hoppers. Twenty-four sets of Clark power shovels with a separate motor driving each set were provided for unloading cars and four car pullers located in the basement below the tracks with endless wire cables extending 400 feet into the yards north of the track shed brought the cars to the pits.

Directly over the inner track were the driers

were arranged in batteries of two. The barley separator, the screening separators and the needle separators were located on the spouting floor, or first floor above the tanks. There were 95 of these concrete tanks 15 feet in diameter and 74 feet high with 72 interstice bins located above the first floor of the work house which was 25 feet high. Thirty-eight elevating legs operated in the work house in wells or leg bins provided between the storage bins.

All elevating legs were driven by individual motors through rope drives and counter shafts which reduced the speed to the operating speed of the leg. Safety clutches were provided to prevent the elevators running backward in case the power was shut off while they were operating. Six of these legs were known as shipping legs, and six were receiving legs, although the receiving legs could also be used for shipping.

The cupola, extending over a hundred feet above the bins of the work house, contained the spouting floor, scale floor, garner floor, and top floor which housed the elevator heads. On the garner floor were 18 3,000-bushel garners, and directly below these on the scale floor were 18 2,000-bushel Fairbanks Hopper Scales.

In operation, grain was unloaded from cars in the track shed into the receiving hoppers which discharged it onto 36 inch belt conveyors running

bleachers was carried by screw conveyors to special bins in the storage section.

The dust collecting system for the house was supplied by the Cyclone Blow Pipe Company and consisted of an expansion chamber, cyclone collectors and the necessary fans to blow the dust to the collectors and convey it after it had settled to the dust house, a concrete building 106x28 feet located about 194 feet south of the work house. The large expansion chamber and 40 cyclones located between the work house and the storage section received the dust from the cleaners and the floor sweeps. Eight floor sweeps were installed in the basement and eight on the first floor, while the cupola was supplied with sixteen. The expansion chamber contained six vent stacks which extended above the roof level of the storage section between it and the work house.

The dust discharged by the cyclones was blown by fans located in the work house to two large cyclones on the roof of the dust sacking house. These cyclones discharged the dust to eight Monitor Dust Packers which sacked the dust for shipment. While this collecting system provided for the removal of dust from the cleaning machines and the dust swept upon the floor when the plant was being cleaned, no aspiration was permitted on the grain entering the house and no suction was supplied on elevators or conveyors.

The work house and track shed were equipped with an electric signaling system and a pneumatic tube system for transmission of written messages. Speaking tubes were also provided between certain points; and a telephone system with 34 instruments placed at various points throughout the plant provided a means of communication between workmen in the plant and the office. All electric wiring for power and lighting was properly installed in conduit.

The storage section of the elevator consists of 182 reinforced concrete storage bins, 21 feet 11 inches inside diameter, and 105 feet deep with the resulting 156 interstice bins. The bin walls were 7 inches thick. Each cylindrical bin had a capacity of 32,000 bushels and the interstice bins each held 8,000 bushels. In the tunnels under the storage tanks, running east and west, were 14 42-inch belt conveyors which received grain from the bins and delivered it to the work house or the river house. Above the bins in the storage house were 12 42-inch belt conveyors which carried grain from the work house to the storage section or to the river house. Each belt was equipped with a self propelled reversible tripper which could discharge to storage bins on either side, to the interstice bins, to the first row of bins in the work house, or to bins in the river house.

Grain could be delivered to the river house by any of the belt conveyors above or below the storage section. A thermometer system was provided in 210 bins with a central switch board room above the storage tanks where the operator could quickly obtain the temperature of the grain at 5 foot intervals in the cylindrical bins and 10 foot intervals in the interstice bins.

The river house, which was constructed of concrete and steel, was 270 feet long, 45 feet wide and 184 feet high. It contained 24 cylindrical concrete bins, 22 feet, 6 inches between centers, and 95 feet deep, arranged in two rows of 12 bins each, running north and south. The river house was equipped with six elevating legs, two 42-inch belt conveyors running the length of the house, and six scales with garners similar to the ones in the work house. One conveyor in the basement received grain from the inner row of river house bins or from the conveyors under the storage section and delivered it to the shipping legs. The belt conveyor on the cupola of the river house received grain from the elevating legs or from the scales and could discharge it to river house bins, or to the belt conveyors above the storage bins which would carry it to any storage bin or to the work house.

The marine tower, 28x32 feet and 145 feet high, built of structural steel with concrete curtain walls, was located at the south end of the river

(Continued on Page 191)



THE SOUTHEAST CORNER OF THE PLANT AS IT APPEARED FROM ACROSS THE RIVER AFTER THE EXPLOSION

with their garners extending up along the west side of the work house to the level of the bin floor. This installation consisted of six Ellis Driers arranged in two batteries of three units each, three Hess Driers and three Morris Driers, making 12 units in all. Over each drier was a 6,000 bushel steel garner and grain was elevated to these garners by two legs located on the west side of the work house. Each leg delivered through fixed spouts to six garners. Four elevating legs were supplied to carry the grain delivered by the driers from the basement to the spouting floor. These legs were also located on the west side of the work house.

The first floor of the work house contained most of the cleaning equipment which consisted of 20 No. 11 Monitor Oat Clippers, four No. 15 Monitor Elevator Separators, six No. 11 Monitor Elevator Separators, two No. 9 Monitor Screenings Separators, four No. 11 Monitor Barley Separators, one No. 15 Monitor Barley Separator, two Invincible Double Needle Separators and one No. 3 McDaniel Wheat Washer. These machines were constructed of metal or of wood covered with sheet metal.

The clippers were arranged in batteries of four machines on the east side of the work house and driven by a direct connected 60 horsepower General Electric motor. Each battery discharged to a separate elevating leg. The cleaning machines

from the hoppers to the receiving legs in the work house. From this point it was elevated to the cupola and discharged into the scale garners. After passing through the scales the grain could be discharged directly onto conveyor belts which carried it to any bin in the storage section, or it could be dropped to the cleaners, into the work house bins, or sent to the river house for loading boats. The grain could also be diverted directly from the scales to car spouts for reloading.

In the cupola were two large belt conveyors running the length of the work house, and a similar conveyor operated in the basement. These belts, supplied with loaders and trippers, were reversible and played an important part in the rapid handling or distribution of grain.

Three Reynolds Bleaching Towers were erected along the east wall of the work house cupola from the level of the spouting floor. These towers were 6 feet in diameter, 63 feet high and each contained two bleaching units which could be operated separately. The capacity of each tower was 8,000 bushels an hour. Sulphur for the bleachers was stored in the small concrete building shown on the plans just south of the work house, and elevated to the bleacher furnaces as needed. Grain was fed to the bleachers from three elevating legs which extended to the top of the work house cupola and grain discharged from the

SCALE REQUIREMENTS

The rules for weighing grain on track scales, as promulgated by Docket 9009, Interstate Commerce Commission, are given below. These rules only apply to scales installed after date of promulgation of these rules.

RULES FOR WEIGHING GRAIN ON TRACK SCALES

1. Approval: All scales before being placed in service shall be tested and approved; and shall comply with the specifications for track scales provided herein.

2. Examination: Examine the scale and make sure that the parts of the scale are free, and that the platform is clear.

3. Balancing the Scale: The scale shall be kept in balance at all times being used. The scale is balanced when the beam is in a position of equilibrium in the center of the loop; and both gross and tare shall be weighed with the same balance.

4. Setting of Car: Cars shall be cut at both ends, and the car and scale shall be free from all interference at the time of weighing.

5. Records. All records shall be kept in bound books, and in a clear, systematic manner.

6. Entry of Weights: The record of the weight shall be entered immediately upon making the weighing.

7. Check System: Check systems shall be used when scales are provided with them. Where there is no check system a record of the denominations of the weights used in each weighing shall be kept. Immediately on weighing the written record shall be compared with the check system used.

8. Cleaning Cars: After a car is unloaded and before the weighing is completed, examine the car to see that all the grain has been removed.

9. Tare Weight: (a) Inbound Cars: Before obtaining the tare weight of the car all grain door lumber and other cooperage material or sacks or other containers must be checked and returned to the car.

(b) Out-Bound Cars: On out-bound cars the same care must be used with reference to cooperage material, sacks and other containers.

FLAG SMUT

Although Flag Smut was first found in this country only two years ago, the experts of the Department of Agriculture have already devised means for its control. It was first discovered in Madison County, Ill., near Granite City, and last year was found in 111 fields, confined, however, to an area of 47 square miles. The territory was quarantined at once.

How the disease was introduced, nobody has discovered. It has long been known in Australia where it causes a considerable annual loss. It is also found in India and South Africa. All three of these localities are so remote from Illinois that the appearance of the disease in this interior state is a mystery.

Flag Smut is so named because of the black stripes running lengthwise in the leaves and leaf sheaths. Diseased plants are stunted and rarely seed. The disease is spread by spores carried on the seed and by spores left in the field on infected plant material, or on the ground where they may be scattered in various ways and infest wheat seedlings in the fall. The most important way in which the disease is spread is through the spores that cling to the seed. In threshing, the spores are knocked out of diseased leaves and scattered over the grain. Spores are also carried for long distances by the wind or by running water. These spores germinate in the soil and if near enough to seed may infect the young wheat seedling. It is not known how long the spores will live in the soil.

Among the methods of control adopted are treatment of fall grain with formaldehyde as it comes from the thresher; burning all straw in quarantined area; sowing no wheat on infected land; obtaining seed from localities known to be free from Flag Smut; treatment of seed by the copper-sul-

phate method; and finally, growing varieties of wheat known to be highly resistant to this disease.

Among the Illinois wheats that combine good yielding ability and resistance to the disease are Fulcaster, Gipsy, Red Wave, Turkey Red, and Early May. Red Wave, however, is a poor milling wheat. Varieties that appear susceptible to Flag Smut are Red Cross, Salzer Prize-Taker, Salzer Pride, Dawson Golden Chaff, Fultz, Illini Chief and Jones Winter Fife.

The present year will probably decide whether Flag Smut can be confined to the small area where it has appeared or whether it will spread to other parts of the Winter wheat territory.

A HOUSE OF NOVEL FEATURES

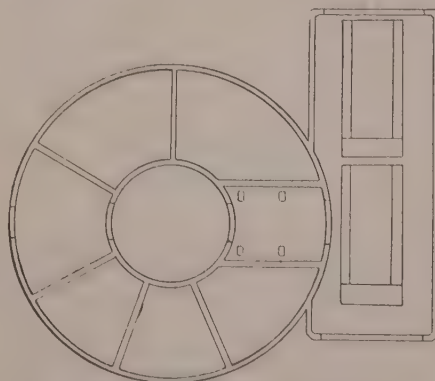
The elevator of the Farmers Elevator Company at Sheffield, Ill., has a number of features which are noteworthy and which bid fair to make the design a popular one for country stations. The capacity of the house is 35,000 bushels, which is somewhat above the average for shipping stations,



FARMERS ELEVATOR AT SHEFFIELD, ILL.

but it is economical in construction and operation and could easily be adapted to various sizes. The plant was designed and the construction was supervised by Holbrook, Warren & Andrew of Decatur, Ill., the building being done by L. N. Cope & Son of the same city.

The structure is cylindrical in shape, 32 feet in diameter, with a circular bin in the center one-third the diameter of the entire structure. Radial



BIN PLAN AND WORK FLOOR OF SHEFFIELD HOUSE

partitions from this central bin form seven other storage bins and the working section, the latter adjoining the covered driveway which is entirely outside of the main structure. The bins vary from 51 to 68 feet in height, and above them is a cupola containing the elevator heads and a 1,500-bushel automatic scale with type registering counter.

In the driveway are two Challenge Wagon Dumps,

both sinks hopping to the elevator boots. All of the bins hopper to the boots also, so there is no need of a conveyor of any kind in the house.

The working section of the house contains two steel legs with 9x5½-inch "V" buckets; a manlift, and a steel ladder, both reaching to the scale floor. Provision is also made for a grain cleaner whenever it is necessary to install one. Both the boots and the heads of the elevators are of steel.

Power is derived from a 15-horsepower electric motor, controlled from the working floor, and with belt drive to both elevator shafts.

A concrete office building, 12x24 feet on the ground plan, commands the approach to the elevator. The building has two rooms and a bay window where the tally man can have semi-privacy. The Howe Wagon Scale is in front of the bay and registers inside the office.

The house is on the Rock Island Railway and has one shipping spout with a capacity of 6,500 bushels per hour. The receiving capacity is 2,000 bushels per hour.

In addition to the various grains, coal and cement are handled by the company in considerable quantities, and its operations have been most satisfactory since the company was organized in 1918.

ARGENTINA'S WHEAT CROP

The following table gives the statistical history of Argentina as a wheat producer and exporter since 1899:

Harvest of	Area sown	Production	Exports (cal-
Jan.—	Acres	Bushels	endar year)
1921.....	14,820,000	184,000,000	*121,000,000
1920.....	14,960,000	214,000,000	127,850,000
1919.....	16,975,000	172,000,000	137,350,000
1918.....	17,875,000	181,000,000	119,000,000
1917.....	16,000,000	80,000,000	40,078,000
1916.....	16,420,000	173,000,000	91,625,000
1915.....	15,470,000	169,000,000	98,150,000
1914.....	16,240,000	114,000,000	39,430,000
1913.....	17,100,000	187,000,000	109,630,000
1912.....	17,040,000	156,000,000	193,260,000
1911.....	15,450,000	146,000,000	90,000,000
1910.....	14,420,000	131,000,000	75,000,000
1909.....	14,980,000	156,000,000	98,270,000
1908.....	14,230,000	192,000,000	139,350,000
1907.....	14,060,000	156,000,000	104,000,000
1906.....	14,020,000	135,000,000	88,000,000
1905.....	12,110,000	150,000,000	96,000,000
1904.....	10,670,000	130,000,000	89,000,000
1903.....	9,130,000	104,000,000	63,000,000
1902.....	8,140,000	56,000,000	24,000,000
1901.....	8,350,000	75,000,000	33,000,000
1900.....	8,030,000	101,000,000	71,000,000
1899.....	7,900,000	105,000,000	63,000,000

*Official estimate of exportable surplus from the 1921 crop.

EXPORT GRAIN RATES REDUCED

On September 1, the Interstate Commerce Commission granted authority for a reduction of 5½ cents, upon five days' notice, from Missouri River and Mississippi River points, also certain territory between the two rivers and in Illinois to Gulf ports, Mobile to Galveston, inclusive. Authority was also granted to publish on five days' notice reductions ranging from 1 to 5½ cents per 100 pounds from the territory lying west of the Missouri River in Nebraska, Kansas, Colorado and Oklahoma to Gulf ports.

The reduced rates are to apply during the remainder of the calendar year 1921. Beginning January 1, 1922, however, the former rates will become effective again unless other adjustments are made. The Commission expressly declared, in granting this authority, that the act does not constitute approval of the relative adjustment of rates either as between the Gulf ports on the one hand and Atlantic ports on the other, as to which there is much controversy, or with respect to the relative rates from interior western points as compared with Missouri River points.

THE Indian Government has announced that the existing prohibition against exports of wheat will be continued until next March and possibly longer. Millers will be allowed to re-export 50 per cent of the fine flour produced from import wheat. India has already bought 1,500,000 bushels from Australia.



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This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

Official Paper of the Grain Dealers National Association and of the Illinois Grain Dealers Association

CHICAGO, ILL., SEPTEMBER 15, 1921

ET TU BRUTE!

THE propaganda in behalf of the poor, abused farmer has a kick-back like the crank of a Ford. For many months the farm press, that needs subscribers, and Federal and state politicians, that need the farmers' votes, have dinned into our ears at every opportunity the desperate condition in which declines in grain and livestock put the farmer. He has been shown to us as on the verge of ruin, his legislative needs have pressed for attention, and always it appears that only drastic measures and preferment of him as a class can save even a thin slice of his bacon. And now comes the kick.

It seems that all this demagogic blah has had its effect. The public is thoroughly "sold," as they say in advertising conferences, to the fact that the farmer has been ruined by the speculators, the packers, the railroads or whatnot. As a consequence manufacturers no longer see any use in advertising their wares to a bankrupt class, or offering commodities to countrymen who have no money. Farm paper advertising has fallen off. So the Agricultural Publishers Association has filed a protest with Senator G. W. Norris. They take issues with the August grain crop:

"This shows a monetary loss of 250 million dollars, as compared with the estimate of July 1st. This report is both incomplete and misleading," according to the Association secretary, who points out that the loss mentioned in the revised estimate, which is purely an estimate, is only 1 per cent of the 25 billion dollar annual turnover of the farming business, and would compare with a salary

cut from \$100 to \$99. This is certainly not enough to warrant the belief that farmers are no longer able to buy advertised articles.

"In justice to the farmers of the country, whose credit standing is likely to be jeopardized by a report of this kind, which does not take all of the facts in the case into consideration, and in view of the fact that the farmer has already borne more than his just share of readjustment, more care should be exercised in reporting full facts to the general public when the Government publishes statements about the farmers' business."

The farm papers have been largely instrumental in making this bed, and now they don't like to lie in it. Can it be that they have joined the ranks of the subsidized press ("Wall Street" always does the subsidizing, we understand) and have turned against the hand that feeds them? It is another object lesson in the difficulty of carrying water on both shoulders.

JUGGLING FIGURES

IN THE western grain rate hearings, L. E. Wettling, statistician for the western roads, said that the average grain haul was 300 miles as against 201 miles for other traffic. The roads receive 1.1 cents per ton mile on grain and for all other traffic an average of 1.44 cents. This is a curious argument as the roads have testified many times that terminal costs are among the chief items in transportation expense, so that the longer grain movement should command a materially lower rate as the terminal cost is reduced one-third per ton mile, while the rate differential is less than one-fourth.

Mr. Wettling also quoted the Federal Trade Commission to the effect that grain elevators received a profit of 8.05 cents per bushel and the net return on the investment amounted to 25.33 per cent. He held that the farmers should go to the elevators for relief and not to the railroads. Under cross examination Mr. Wettling admitted that the Federal Trade Commission figures were gross and not net, and said his testimony should be corrected to show the facts.

Isn't it a pity, in a question of as grave import as this, that a principal witness should juggle figures and distort truth to gain a point, rather than make a serious effort to reach the fundamental basis upon which fair rates can be based?

SOME SPEED

ON SEPTEMBER 12 there came to this office the Illinois Crop Report of July 1 and the "Advance Sheet" of the Crop Report of August 1. The "Advance Sheet" contained production figures on the various grains and on apples. This report is obviously intended for the use of those interested in grain, but what use it could be a month and a half after the statistics were gathered we can't imagine. For all the good these reports do they might as well be discontinued and a considerable printing bill saved to the state.

The Government crop report is issued not more than nine days after statistics are gath-

ered and, by way of public press, reaches all parts of the country at the same time. This is a real service and is of inestimable value. But crop reports that are issued after the crops themselves reach the market are nothing but a waste of public funds.

GRAIN ELEVATORS IN THE SOUTH

THE distress in the cotton districts of the South, not only from the reduction in prices but from the inroads of the boll weevil which in some cases reduces the crop 50 per cent, has turned growers attention again to grain. Six years ago the same conditions existed and a number of grain elevators were built in the Southeast, under the assumption that the increased grain acreage would be permanent. It was—until the price of cotton went up—then the elevators were left with little or nothing to do. A few of them have been prosperous, but in times of high cotton prices grain elevators in the South are of as much use as a phonograph in a deaf and dumb institute.

The success of a brief campaign at the outbreak of the war gave hopes that the South might soon be on a self sustaining grain basis. That educational campaign is quite forgotten and evidently made but a slight impression. Another one is now in progress and without doubt the grain acreage will be considerably increased this year. But as to its being made the basis of new elevator building, that is another question. Certain assurance from the growers that there will be a permanent acreage of grain sufficient to justify an elevator, should first be obtained. Beans and peanuts can be handled in an elevator and can be included in the promised acreage. But high priced cotton is an irresistible temptation to most southern farmers.

HORSE TALK

REMINISCING at the recent New York State Hay & Grain Association, E. A. Dillenbeck of New York City recalled that he had sold hay in that market all the way from \$7 per ton to \$70. The low price was registered in the 80's; the high mark in April, 1920. The low price corrected itself, for the acreage was reduced; the high level of last year, however, was permanently destructive, for it was the incentive for more auto truck buying than was ever known, and many of the teams that were discarded then will never be replaced, in spite of the efforts of the Horse Association of America.

The railroads complain of the auto truck competition, but high freight rates are the only thing that can make competition dangerous. So far as auto trucks develop territory not reached by railroads they are feeders for the rail carriers, and if rates were reduced to pre-war levels the activity of trucks would be limited to that business. But rates will never be reduced to former levels and the truck is a factor which will always be prominent in the problems of the railroad and the horse interests. Horses will always be superior for certain service, but progress will

not be denied and trucks will further limit Dobbin's sphere of usefulness as mechanical improvements appear. This limitation will be more rapid and complete if only the sales talk of truck manufacturers is heard in the land. The Horse Association is the only voice raised in protest, and as the hay and grain trade lend their support to the Association, in like measure will its work be effective in keeping horse replacement within economic bounds.

NEW GRAIN ROUTES

WINTER shipments of grain from the United States to Europe and the Orient may, to a greater extent than ever before, originate at Pacific Coast ports. It is estimated that the three Pacific states will have an exportable surplus of 67,000,000 bushels of wheat. Northern coast wheat is of excellent milling value and it would not be surprising if considerable quantities of it would find their way to Atlantic States mills as well as overseas, and by the water route through the Panama Canal.

Bulk grain shipments through the canal have been tested successfully and the freight saving would be material for the eastern mills that are dependent on all-rail grain from the Northwest. High freight rates are stimulating water traffic more than all the propaganda that has been used. So great a volume of grain has been sent from Chicago and the Head of the Lakes through Canada for European needs that Canadian railroads as connecting lines to Montreal from lake ports have been forced to embargo American grain. On the Mississippi more grain is being handled by barge to New Orleans than for 50 years. Whether water routes would retain this new business if freight rates were lowered is a question, but for the most part water shippers have been highly satisfied and will use boats permanently. For a large share of the grain movement we are dependent on rail entirely, but the new interest in water transportation is worth watching.

BANKERS CRITICIZE

FEDERAL Reserve Bank officials are being criticized by the country press because only \$30,000,000 worth of agricultural paper was handled during 1920. This is a small amount to be sure, considering the value of the farming business, but mere volume does not mean a good risk by any means. Thousands of farmers can get all the credit they need at any time. But the man who uses his money and credit to speculate by holding his grain for higher prices when he has debts to pay, is not on good terms with his banker as a rule, and is the first to criticize the bank for being reasonably conservative. Member banks of the Federal Reserve have had to stretch their resources to the limit to take care of agricultural paper, and at that a great many have been in trouble with frozen credits. In this respect the Federal Reserve Bank hardly deserves the criticism which it has borne.

In another respect, however, it has skated on thin ice: Its attempt to control financial

credits by raising and lowering its discount rates is of questionable merit to say the least. Our conception of the Federal Reserve Law was to provide a safety valve for the necessary expansion and contraction of credits; the bank was to follow commercial needs, not to dictate them; and its opportunity for profit was merely incidental to its chief functions. On the contrary it has been the most profitable corporation in the country; was instrumental in the sudden and violent deflation of last year, and is now attempting to uphold rates when it is clearly apparent that banks, like everything else, will have to deflate, if business is to resume its normal course. The Federal Reserve Bank has laid itself open to criticism, but not because it has made agriculture an exception in its operations.

CAPPER-TINCHER BILL NOW LAW

PRESIDENT Harding signed the Capper-Tincher Bill on August 24, and the grain exchanges will soon be under the supervision of the Secretary of Agriculture. The only clause of the bill which is liable to cause trouble is that which permits co-operative companies to prorate patronage dividends. It remains to be seen whether such payments can be separated from rebates, which every exchange prohibits by its rules. This difference may require a supreme court ruling to settle, for the question has already been raised informally, whether the law is constitutional in this respect.

It is not the actual payment of patronage dividends that terminal market dealers fear, it is the theoretical payment. The promise to do so provides a practical club for co-operative companies to force shippers into their membership. It sounds so well to be among the profit-sharers, and it is certain that little will be said about sharing possible deficits, which shippers will have to do in bad years. This sort of competition might necessitate the rescinding of the rebate rule and a general resumption of the disorganizing tactics in vogue some 20 years ago.

Aside from this feature the law will be harmless unless it is made a political tool. There is little danger of that under the present administration, but it is difficult to conceive a grain exchange doing business with a Capper or a Ladd as Secretary of Agriculture. This contingency makes the law unwholesome and un-American.

A BEARISH REPORT

THE September Government crop report showed material differences from the private reports issued a few days previous. Winter wheat was the same as last month, 544,000,000 bushels, but Spring wheat is given as 209,979,000 bushels, only 3,000,000 under the August forecast and about 15,000,000 above the Snow and Goodman reports. The discrepancy lies in the fact that the Government report is based upon acreage and condition only, while the private reports take actual threshing returns into consideration. Threshing returns have been disappointing in many sections of the Spring wheat belt, so

that the private reports are likely to be more accurate. It must be remembered, too, that about 60,000,000 bushels of the Spring wheat will be Durum, which is not adapted to flour milling purposes.

The oats forecast is for 1,090,282,000 bushels, as against 1,137,202,000 bushels last month, a loss of nearly 47,000,000 bushels. At the same time corn prospects improved by 153,000,000 bushels, the September estimate being placed at 3,185,876,000 bushels. This estimate is also considered high by many who have examined the corn fields, as there are a great many unfilled ears in evidence and a wide infestation of worm which will not be taken into account until the corn is husked. The barley estimates fell to 166,906,000 bushels, a loss of nearly 4,000,000 for the month. The prospect for tame hay is 79,800,000 tons, and for wild hay 14,800,000 tons. Kaffirs promise to yield 127,000,000 bushels. While the report is regarded as bearish, it had little effect upon the market as the trade discounted the bearish features liberally.

THE BIG CONVENTION

ON OCTOBER 3, the Chicago Board of Trade will welcome grain dealers from every part of the country when the Grain Dealers National Association holds its annual convention at the Hotel Sherman in Chicago. The trade will turn out as never before if the importance of the meeting has any bearing on attendance. During the past year the grain business has been shaken to its foundation and only the devotion of a group of leaders has saved it from extinction in its present form. The threat is still present and a vast amount of work remains to be done before we can breathe easy once more, free from the menace of economic fallacies and futile experiments that would cost so much that it would take years to recover from the burden.

In transportation, in legislation, in trade practices, and in administration there are innumerable questions which will have to be settled at this meeting, and which will need the best thought and judgment of every member for proper solution. Every selfish reason and every impulse of loyalty to the Association urges you to come, even at considerable sacrifice to yourself. You will gain far more than the cost can possibly be.

But the convention will not be all serious, as a glance at the program, given on another page, will show. A theatre party to see one of the best and most popular comedians on the American stage is but a part of the entertainment provided. Note the list of speakers, for a stronger aggregation has never appeared before a grain convention. In short the meeting promises to be one long to be remembered and your hosts, the Chicago Board of Trade, have made every provision for your comfort and pleasure while in the city. Come to Chicago on October 3.

A farmer out in Washington has planted practically all of his 32,000 acre ranch to wheat. He is in a position to have a wheat pool all by himself.

EDITORIAL MENTION

Now that Senator Capper's bill is made law perhaps even he may rest from his chronic complaint of the grain exchanges.

Indiana farmers are insuring their crop for the cost of production. Will the county agent or the insurance company determine the cost of the crop? Practically all contingencies except hail are covered in the contract.

Manitoba is trying to sell for \$1,000,000 the 126 elevators belonging to the province, the majority of which are leased to the United Grain Growers. Another case where a state has found it unprofitable to engage in business.

Organizers for the U. S. Grain Growers say the farmers are not paying any attention to the literature of the Grain Dealers National Association. So far as we can learn the farmers are not paying a great deal of attention to the Grain Growers.

In the first five months of this year grain loadings totalled 1,149,868 cars. Since the new crop began to move receipts have broken previous records at almost every market. Surely the railroads cannot complain of the grain trade for their lack of business.

Montana is evidently trying to find how far it can go in dictating the way grain shall be handled in that state, without putting dealers completely out of business. If an operator wants to oil his wagon dump, he will soon be required to file a bond and get a special license.

Farm acreage, by the last census, increased 8.7 per cent over 1910. The total area of land in farms, that is under more or less cultivation, is 955,676,545 acres. The average size of farms in the United States is 148.2 acres, an increase of about 10 acres since the last census.

Up in Alberta they have been experimenting with electrified seed. The seed is put into a salt bath and a mild current run through the liquid. Surprising results are said to have resulted. Perhaps an occasional shock is as good for grain as it for folks. Most of us need stimulation once in a while. Some use electric currents and salt solution, others use dried currants and yeast.

In its educational campaign the National Association advises farmers to consult their lawyers, their bankers or their grain dealers before signing the contract with the U. S. Grain Growers. A Minnesota Non-partisan paper comes back with: "Why not consult his brother farmers and the various farmer organizations? Or why not consult the merchants of his town, editors and school teachers?" A contract, my friend, is a legal document, the one in question containing some

15,000 words. It is rather more likely that a lawyer or banker would know more about the obligations in such a document than another farmer, an editor or a school teacher. Your town merchant might help you and probably would, but do not confuse the issue: This is not a discussion of co-operative marketing as a theory; it is a legal contract which binds you for five years to its terms.

Chicago recently shipped in one cargo 415,000 bushels of corn destined for Europe by way of a Georgian Bay port. The shipment caused no comment, although in ordinary times this would be an unusual export sale of corn. Corn exports are mounting so rapidly, however, that they have even become a factor in the domestic price, a condition rarely if ever known before in this country.

Seed corn should be selected when it is still in the field attached to the stalk. After it is picked you cannot tell how it hangs from the stalk, whether the stalk bears one ear or two; the height of the ear from the ground; or whether the hill had barren stalks. All these factors are important in the selection of seed corn and the time taken for field selection is about as profitable as a farmer could spend.

The United States dollar is worth \$1.49 in Argentina, that is, with the prices the same as in Iowa and Buenos Aires, a dollar will buy 50 per cent more corn in Argentina than here. Comparing railway rates from Iowa with ocean rates from Buenos Aires, it will be seen that the tariff of 15 cents per bushel on corn provided by the emergency tariff bill is hardly enough to keep Argentina corn from our Atlantic Coast.

The exportable surplus of wheat east of the Rockies is estimated at 100,000,000. Exports have already taken 60,000,000 and it is estimated that from 30,000,000 to 50,000,000 bushels in addition have been sold for export but unshipped. This practically exhausts our surplus east of the Rockies. There remains the Pacific Coast grain, but on the other hand no allowance is made for about 60,000,000 bushels of Durum. Think it over.

Northwestern growers complain of the spread between wheat grades, and are ready to prove (sic) that No. 3 is practically as good for milling purposes as No. 1. What silly fools the millers must be to pay a high premium for good wheat when they could get something as good for less money. We suspect it is not the millers who are the silly fools. It is not the politicians either. They have garnered more votes on this issue than any other. Senator Ladd went to Washington on it.

In denying that he had attacked the Eighteenth Amendment or had been "slamming" prohibition, J. Ralph Pickell of the *Round-up*, says that nevertheless some of the "known results" give him pause. And he names one: "The moisture tester used for determining the amount of water in grain, in accordance with the standards established by

the Government of the United States, has been perverted and is being widely used now for the manufacture of whiskey." This is a curious charge, but we see no reason why it may not be true. The perversion consists in using the means adopted for removing wetness from grain to remove dryness from men.

In spite of the strong statistical of wheat, and every grain man is convinced of it, the movement of the Canadian crop is bound to affect present values. Even with the \$1.50 tariff Canadian flour is finding buyers in this country, and for some time to come the big export movement will be from above the border. In addition it is reported that England is reselling American purchases and buying Canadian.

In the article in this issue covering the investigation of the grain dust explosion in the North Western Elevator at Chicago, the following possible causes of the explosion were suggested: Smoking in the elevator; use of oil lanterns; incendiary bomb; short circuit in the electric wiring; spontaneous combustion of oil soaked rags; fire in cleaning machine; ignition of dust on electric lamps; broken electric lamp globes; fire in drier. Are you certain that none of these conditions could be present in your own house?

Many business firms have written off from \$1,000,000 to \$20,000,000 in inventories during the past year. They have taken their losses and said nothing, but have gone to work harder than ever before to make them up. We have not noticed that the business men have been to Washington seeking special class legislation to put them on their feet. Merchandise losses in the past year have far exceeded agricultural losses, but too many politicians would lead us to suppose that the farmers were the only ones hit.

Senator Kenyon of Iowa introduced a bill last month to provide an investigation of the National Association and other organizations alleged "to be combating legislation for the relief of agriculture." This will be a welcome step. Perhaps some of those legislators may be induced to read the Grain Growers contract, then they will understand that the dealers only want to keep the farmers from being made suckers of by a bunch of irresponsible idealists and a few grafters. The dealers will have to share the losses. The investigation will not have to go far.

War instruments are being accommodated to the uses of agriculture. A flame thrower has been invented to burn off stubble and to kill cut worms. It is dragged along the ground and its heat penetrates some distance into the ground. This machine is being tried out in Montana. In Minnesota an airplane is being used to carry a wheat rust spore trap over fields in which wheat is to be planted. The wheat spores in the air collect on prepared microscopic slides in the trap, and wherever they are found steps can be taken to combat the disease, by eliminating barberries and by treating. We are glad war is good for something.

B. C. MOORE
Kansas City

NEWS OF THE TERMINAL MARKETS

MARSHALL HALL
St. Louis

LARGE RECEIPTS AT MILWAUKEE

Grain receipts at Milwaukee, Wis., for the month of August were the largest on record amounting to 8,426 cars. The previous largest month for receipts was September, 1916, when 7,358 cars were received.

TO TRADE IN COTTON SEED OIL

The Chicago Board of Trade, almost by unanimous vote, recently decided to trade in cotton seed oil. Units of 60,000 pounds or 100 barrels equal to one tank car load will be traded in. The details will be worked out shortly when trading will be commenced.

ELECTION ON WINNIPEG GRAIN EXCHANGE

Officers to serve on the Winnipeg Grain Exchange, Winnipeg, Manitoba, were elected recently as follows:

For president, C. H. Leaman, manager of the Northern Elevator Company; vice-president, J. B. Craig, manager of the Central Grain Company; secretary-treasurer, Dr. Robert Magill.

TO MOVE STATE GRAIN INSPECTION DEPARTMENT

Arrangements have been made for the removal of the Kansas State Grain Inspection Department from the Missouri side, where they have been located since 1915, to Kansas City, Kan. The inspection of grain will be continued in the present quarters on the Missouri side, opposite the Board of Trade Building.

CHICAGO'S AUGUST BUSINESS NEAR RECORD

The figures for receipts and shipments of grain at Chicago, for the month of August, as given by the chief weighmaster, pretty nearly constitutes a record. Receipts for the month were 33,400 cars. Shipments were 3,339 cars and 34,700,000 bushels by vessels, which would make the total shipments somewhere in the neighborhood of 40,000,000 bushels.

THE ST. LOUIS MARKET

Our wheat market the past week has shown signs of being overbought. There is too much company on the long side of wheat for it to be in a healthy condition. Cash wheat has been more or less draggy all week and the premiums are gradually disappearing. The cash market closed 3 to 4 cents lower with the week and the millers and buyers of all kinds have practically dropped out of the market. Exporters via New Orleans are bidding 9 cents over the Chicago December tonight, while last week they were bidding 1 cent over. We look to see this wheat do better next week, as we think it will have much less speculation to contend with.

Corn has been dull, neglected, and not wanted generally. Receipts have been extremely light and any increased offerings would result in much lower prices. In our cash market this Yellow corn has held up fairly well but it is due entirely to the extremely light receipts. White and mixed corn sells at the same price and is a drug on the market. Corn is offered to us from every direction, with very little demand to meet it.

Oats are in good demand and prices are gradually getting stronger. Thirty days ago we urged all of our good shippers to hold on to their oats and not allow them to come on the market—they were then selling at 10 cents under the Chicago

September, and the very same oats are today selling at the September price to 2 cents over. We look to see May oats and May corn sell very close together also look for the cash demand on oats to continue.—*Elmore-Schultz Grain Company, St. Louis, Mo. Letter of week ending September 12.*

HUGO STOLLEY

One might say of Hugo Stolley, as a personal note, that he is a committee man on the Milwaukee Chamber of Commerce. He is at present chairman of the Finance and Publicity Committee, serves also on the Transportation Committee and is likewise in his second term as director of the Chamber. All of which will go to show that, as he is also vice-president of Henry Rang & Co., of Chi-



HUGO STOLLEY

cago, and manager of the Milwaukee office of the company, he is a very busy man.

Mr. Stolley has a record of 37 years in the grain trade and his career has been an interesting one. He was born in Davenport, Iowa, in 1874, and in the year 1889 when 15 years of age engaged with the old Davenport Mills, remaining with them until 1895. He then went to Winterset, Iowa, for J. F. Dow of the same firm, where he operated a country elevator. In 1898, he returned to Davenport to become assistant manager of the Davenport Elevator Company, of which he later became manager. He went to Milwaukee in October 1914, as manager for Henry Rang & Co., and has been vice-president of the company since 1915. Other officers of this well-known grain commission house are E. M. Larson, president; W. M. Paris, secretary.

Mr. Stolley is one of the most popular of the members of the Milwaukee Chamber of Commerce and has contributed a full share of the effort that has caused a steady growth in the importance of Milwaukee, during the past years, as a grain center. The entire Milwaukee Exchange membership, we might add, are unanimous in the

belief that the future holds a distinguished place for that city among the country's grain market places.

IMPROVEMENTS FOR KANSAS CITY BOARD OF TRADE

The members of the Kansas City Board of Trade voted recently to make a number of changes in the trading floor, providing for additional room for the telegraph companies as well as for additional grain tables. The present smoking room will be abolished and a balcony will be built over the telegraph offices to provide room for the smokers. The old smoking room will be occupied by the telegraph offices.

RECEIPTS JUST ABOUT SUFFICIENT

Local conditions in this market during the past week are practically unchanged. There is very little Winter wheat arriving here, but enough to take care of the local demand. Most of the mills here grind Spring wheat. There was a good business reported in this class of wheat during the past week.

Corn receipts are just about enough to take care of local demand with cash prices following the Chicago option. Cash oats in this market are very tight at the present time, receipts are light and indications are that there will be a good cash demand right along.—*McConnell Grain Corporation, Buffalo, N. Y. Market letter of September 12.*

FARMERS AND ELEVATORS STOCKED WITH OATS

The movement of both wheat and oats has been very light from our territory during the past week, but there has been a small movement of corn. Our market has enjoyed a fair demand to the south of us during the past week, but nothing equal to the supply. We find both farmers and country elevators well stocked with oats, which they are holding for higher prices, but we are of the opinion that corn will move quite freely between now and the new crop movement. Up to date the quality of our new corn is excellent.—*Dewain-Hamman Company, Decatur, Ill. Letter for week ending September 12.*

NEW OFFICERS AT OKLAHOMA CITY

At the annual meeting on September 5 of the Oklahoma City Grain Exchange, Oklahoma City, Okla., Garland White, president of the White Grain Company, was elected president, succeeding Jesse Vandenberg who was retained as a member of the Board of Directors. C. B. Cozart of the Cozart Grain Company was elected vice-president and G. V. Topping, former secretary of the Oklahoma Millers Association, secretary-treasurer. Other directors are J. J. Stinnett of the Stinnett Grain Company, Fritz Straughn, a vice-president of the Oklahoma Grain Dealers Association; George W. Curtis of the Plansifter Milling Company, and George W. Williams.

TRADING IN "PUTS AND CALLS" ENDS

After an existence of 50 years trading in "indemnities," more recently known as "bids and offers" will cease on the Chicago Board of Trade on October 1. The Board by a vote of 573 to 41 decided to abolish this rule on September 7. The change was made to conform the rules of the Board with the Capper-Tincher Bill which was enacted into law recently.

Opinion has always been divided among Board of Trade members as to the benefit in the market derived from "indemnities." Originally invented

as an insurance measure, they were for years condemned by leading men on the market as a menace to the market rather than a benefit. On several occasions during the last 30 years trading in them was discontinued for a time but was renewed on the plea that they were an insurance.

WILL INCREASE SEATTLE'S WHEAT EXPORTS

A forward step is to be taken in the work of building up the wheat cargo movement of Seattle, Wash. The Public Port Commission of Seattle has made arrangements with J. A. Pease, former head of the grain department of the Fisher Milling Company, as representative of eastern interests, through which 5,000,000 bushels of wheat will be brought to Seattle each year for export. It will be sufficient to fill 30 deep sea steamships and is expected to divert other millions of bushels of wheat to Seattle for export. The Port Commission's Hanford Street Elevator has a bulk capacity of 1,000,000 bushels and sacked capacity of 1,000,000 bushels.

STILL TIME FOR AN ADVANCE

The low point on Chicago December a few weeks ago was \$1.14, and the advance since then, of course, discounts some of the bullish conditions, but many in the trade look for very much higher prices because of our short crop, a shortage in the world's crop, possibility of serious damage to the Argentine wheat, and the big shortage that exists in the potato, rice and other crops. Bears have suffered severely, but they think the market has gone up about enough for the time being, and that a natural reaction, if nothing else, is due. They still argue that there is no real shortage yet, general conditions the world over are still bad, etc., etc. *J. F. Zahm & Co., Toledo, Ohio. From Red Letter of September 12.*

STOCKS OF CORN ACCUMULATING

Receipts of corn have been more than ample for the light demand and stocks are slowly accumulating. Nearby Western States offering corn freely at much less than western terminal markets. Lake and rail shipments continue offering at attractive prices.

Receipts of oats are somewhat lighter but limited demand has kept our market steady under strong western markets. Buyers are slow to take hold of oats at increased values. Industrial conditions are not encouraging. Retailers all complain of slow collections and therefore are buying from hand to mouth.

The advance of past few days in both corn and oats has not caused buyers any concern. Liberal stocks of oats especially, are held in Pittsburgh elevators.—*Harper Grain Company, Pittsburgh, Pa. Market letter of September 12.*

ENLARGE PORTLAND, ORE., AS AN EXPORT CENTER

A development which may make Portland, Ore., the greatest grain center west of Chicago was the recent establishment of Portland as the Pacific Coast headquarters for the Gray-Rosenbaum Grain Company, Inc., of Oregon. The newly incorporated wheat exporting concern is a union of the P. N. Gray Company, Inc., of New York and the J. Rosenbaum Grain Company, of Chicago. The concern plans to buy heavily and ship through northwestern ports to foreign destinations. About 90 per cent of the grain they buy will be routed through the Rose City, it was announced and will move in bulk through the 1,000,000-bushel capacity grain elevator at Municipal Terminal No. 4.

The newly organized Gray-Rosenbaum Company, Inc., opened business in Portland under the management of Charles W. Baum, a member of the firm. A staff from the Chicago and New York offices will soon be brought to take charge of the Pacific Coast headquarters. All the grain that can be purchased in the Columbia River Basin will be acquired by the firm and buyers already have been placed in the field. P. N. Gray of New York, E. F. Rosenbaum of Chicago, and Charles W. Baum spent two weeks in the Northwest before choosing

a port from which to export their grain purchases. The differential in freight rates in favor of Portland from the rich Snake River wheat belt was largely instrumental in determining the selection as were the excellent facilities for handling bulk wheat. The announcement that wheat will be shipped in bulk is expected to give still greater impetus to bulk grain handling in the Northwest where grain shipments were in the past largely handled in sacks. The Gray-Rosenbaum interests yearly ship approximately 150,000,000 bushels of grain to foreign countries.

DEATH OF CLYDE ALBERT McCARDLE

The grain trade of Indianapolis, Ind., lost one of its most prominent grain merchants in the death of Clyde Albert McCardle, secretary and treasurer of McCardle-Black Company, which occurred in Highland Park Hospital, Detroit, Mich., August 18. He was in his forty-first year. He was the son of John W. McCardle, chairman of the Indiana Public Service Commission and himself a former well-known grain dealer operating elevators at various points in the state.

Mr. McCardle was born on a farm in Fountain County, Indiana, and spent his early days at Attica, to which his father and mother removed



THE LATE CLYDE ALBERT McCARDLE

shortly after his birth. He attended school there and at New Richmond, later taking the courses at Wabash College and Indiana University.

On leaving college Mr. McCardle was associated with his father in the grain business at New Richmond and removed with his parents to Indianapolis in 1905. He was later engaged for a short time in the grain business at Terhune, which he left to become associated with the grain commission firm at Indianapolis, with which he was connected at the time of his death.

Mr. McCardle is survived by his widow and an adopted son of four years of age and daughter of 12. The interment was in Brown Hill Cemetery, Indianapolis.

LOOK FOR FREE MOVEMENT

Arrivals of corn here have been fairly large here the past week. While prices have not been following the full advance in other markets, all receipts have been well taken care of, the main demand being from the Corn Products plant, who have increased their daily grinds. There has been very little business for shipment from this market, the demand East, particularly for domestic purposes, being very light. The country has been selling freely on bids and advices of consignments are fair. We look for a free movement of corn for some time to come.

Receipts of oats have been fair and prices have been holding fairly well in line with other mar-

kets. The biggest portion of the arrivals have been ordered to elevators to be put in store. There is very little shipping demand for this cereal at the present time. Acceptances on bids from the country have been light, also advices of consignments.—*Mueller Grain Company, Peoria, Ill. Letter for week ending September 12.*

CHANGES IN MEMBERSHIP

Chicago.—New members recently elected to membership on the Board of Trade are: I. S. Hughes, H. M. Stratton, John Fergogle, J. Minami, R. E. L. Sunderling, J. H. Herron, S. T. Aber, M. J. Stepack, G. P. Harbison, W. D. Hogerty, J. C. Lake, W. C. Engel, J. A. Taylor. The memberships of the following have been transferred: E. W. Jacob, J. B. McGregor, A. A. Thurman, W. B. Lewis, Estate of J. R. Collins, A. C. Harsh, Est. of J. G. Murray, Burton Joseph, A. J. Cameron, N. J. Brogau, A. C. Robinson, J. A. Foerstel and R. H. Mathes. Reported by Secretary John R. Mauff.

Duluth.—James M. Owen and John H. MacMillan, Jr., have been admitted to the Board of Trade. G. H. Walker and John H. MacMillan have withdrawn their memberships on the Board. Reported by Secretary Chas. F. MacDonald.

Wichita.—Memberships on the Board of Trade have been granted to the following: C. W. Stiles, of the Larabee Flour Mills Corporation; H. F. Braly, Braly Grain Company, and C. M. Evans, Baker-Evans Grain Company. Reported by Secretary R. E. Waltermire.

TERMINAL NOTES

Memberships in the Chicago Board of Trade are selling at about \$6,500 net to the buyer.

M. B. Sharpe of the Moore-Seaver Grain Company of Kansas City, Mo., spent the latter part of August calling on the trade at St. Louis, Mo.

H. K. Schafer, manager of the Maney Grain Company, of Omaha, Neb., visited a number of eastern grain exchanges the first part of September.

W. L. Hutcheson has sold his interest in the Central Grain Company of Oklahoma City, Okla., to E. L. Bentke, the manager of the company.

The Newsome Feed Company of Pittsburgh, Pa., has opened an office at 128 Corn Exchange Building, Minneapolis, Minn., with J. R. Stuart, manager.

John F. Sugrue of the Kansas City office of Armour Grain Company of Chicago, Ill., has been elected a member of the Kansas City Board of Trade.

Wm. U. Smith has been appointed grain supervisor by the United States Department of Agriculture for the Philadelphia district with offices in the Bourse Building.

John T. Fahey & Co., of Baltimore, Md., will ship from that port this month the first full cargo of rye which has been shipped from this country to Finland in many years.

The Northern Grain & Warehouse Company of Portland, Ore., has acquired and is now operating the 22 elevators owned by the Montana Grain Growers Company now in receivership.

D. V. Heck, formerly of Hardman & Heck, Pittsburgh, Pa., has become associated with W. F. Heck & Co., wholesale grain, hay and feed dealers with offices in Room 703 Wabash Building.

J. M. Chilton, late Federal grain supervisor at Kansas City, Mo., has become associated with the Hall-Baker Grain Company of Kansas City. His former place was taken by M. Shuler.

J. R. Stewart of the Banner Grain Company of Minneapolis, Minn., recently took over the property of the Clark Milling Company of that city in order to protect an interest through a mortgage.

The Corn Products Refining Company of Chicago, Ill., is reported to be operating at about 75 per cent of capacity, grinding about 115,000 bushels of corn daily against a normal amount of 155,000 bushels.

The Merchants Elevator Company has closed its Minneapolis office and moved to Davenport, Iowa, where their terminal elevator is located and which

is near many of their country elevators. Officers of the company are H. D. McCord, president; A. E. Cobb, vice-president; R. S. Jones, secretary; W. H. Halliday, assistant secretary.

E. F. Morris has resigned his position as manager of the feed department of Armour Grain Company of Chicago, Ill., to take charge of the feed department of the Smith Milling Company of Milwaukee, Wis.

Edward and Le Roy La Budde have withdrawn from the Franke-La Budde Grain Company of Milwaukee, Wis., to organize the La Budde Feed & Grain Company. Offices are in the Chamber of Commerce Building.

Jackson Bros. & Co., have enlarged and rearranged their customers' room in their general offices in Rooms 309 to 318 Postal Telegraph Building, Chicago. Private wires operate to all principal markets for grain and stocks.

It is expected the Cairo, Ill., terminal of the Federal Barge Line will be in operation before October 1. The first track barge constructed of reinforced concrete 266 feet long and 36 feet wide and equipped with three tracks for cars is at Cairo and others are on the way.

The Zahringer Malt Products Company of Milwaukee, Wis., was recently incorporated with capital stock of \$20,000 to wholesale and retail malt sirups, malt and other malt products. George M. Zahringer is president of the company and associated with him are John B. Lange and C. H. Piffer.

The Mikkelson & Riggs Grain Company has been organized with offices in Spokane, Wash., and Portland, Ore., to conduct a general grain business. M. B. Mikkelson has been for some years identified with the Lewiston Milling Company and T. A. Riggs has been the Portland manager for the same concern.

The Monarch Elevator Company of Minneapolis, Minn., recently purchased from the Northwestern Elevator Company about 55 grain elevators along the lines of the Great Northern and Northern Pacific Railroads in Minnesota and North Dakota. This purchase increases the number of grain elevators owned by the Monarch Elevator Company to 175 houses.

The headquarters of the grain department of Penick & Ford, Ltd., Inc., have been moved from Chicago to Cedar Rapids, Iowa, where the company's corn grinding plant is located, and Manager E. H. Bingham has taken up his residence there. The executive headquarters of the company, nationally known as a large manufacturer of sugar, cane and corn products, are at New Orleans, La.

The steamer *Lakewood* cleared recently with the sixth cargo of wheat and rye that has been loaded at the East Side Iron Elevator and the Baltimore & Ohio Dock at Toledo, Ohio, for Montreal. Shipments by boat from Toledo to Montreal have been unusually large of late, the movement being explained by lower vessel rates as compared with railroad rates. The grain originated in Ohio, Indiana and Michigan.

Edward M. Flesh, former grain man of St. Louis, Mo., who in the late war was placed in charge of the St. Louis office of the Food Administration and for several years treasurer of the United States Grain Corporation, was recently appointed by Secretary of Commerce Hoover a member of the American Relief Administration for the relief of Russian famine conditions. He will have his headquarters in New York City.

The Columbus Grain & Hay Company has been formed at Columbus, Ohio, to succeed O. W. Cook & Co., wholesale shippers of grain and hay. The change was made necessary by the death of O. W. Cook, which occurred last July. The new firm is composed of Omer Snyder, who for many years operated a grain elevator at Tremont City, Ohio, and Mrs. Mabel Stevenson, who had been Mr. Cook's partner since the formation of O. W. Cook & Co. Both members of the Columbus Grain & Hay Company have been for many years in the grain business and will endeavor to continue to serve

their friends and customers with "Golden Rule" service as in the past. The old offices at 301 Commerce Building are retained.

The Milwaukee Chamber of Commerce, Milwaukee, Wis., adopted a resolution August 24, declaring 200,000 bushels storage in the Chicago & Northwestern Rialto Elevator operated by the Donahue-Stratton Company and 300,000 bushels storage in the St. Paul Elevator E operated by the Taylor & Bournique Company, "regular" warehouses for the storage of grain and flax seed, under the rules of the Chamber of Commerce for the period ending August 1, 1922.

LARGE INSTALLATION OF ZELENY THERMOMETER SYSTEM

The Western Fire Appliance Works of Chicago, Ill., has the contract for reinstalling the Zeleny Thermometer System in the 360 tanks of the Chicago & Northwestern Railroad Elevator at South Chicago, Ill., which was destroyed by dust explosion last spring and is now being rebuilt. As an indication of the size of this order there are 20 reading junctions in each tank; 10 reading junctions in each interstice making a total of 5,540 readings, and 284 miles of wire are required to complete the installation. One man can read the temperature of all the bins in about 16 hours. The system keeps the superintendent informed with the conditions of every bin in the elevator, as regards its temperature, thereby saving the turning of many millions of bushels of grain annually.

"ELECTRIFIED SEED"

Up in Alberta they have been experimenting with a process for electrically treating seed grain to increase germination and yield. The excess consists in placing the seed in a bath containing metallic salt, such as calcium or sodium chloride, and weekly electrifying the liquid. After the electric current has played over the grain to be planted a certain fixed time, the solution is drained off and the seed dried. The object of the salt, it is said, is not only to decrease the resistance of the seed coat but to maintain conductivity during the period of germination. Calcium and sodium chlor-

ide in the correct proportions, it is declared, stimulate growth and give strength to the new roots. It is said that many wheat growers in Alberta have obtained good results from the electrified seed.

EXHIBIT OF MORSE CHAIN DRIVES

One of the features of the Seventh National Exposition of Chemical Industries, held the week of September 12 at the Eighth Coast Artillery Armory, New York City, was the exhibit of the Morse Chain Company of Ithaca, N. Y. This exhibit included a Morse Rocker Joint Silent Chain Drive of two-inch pitch by five inches wide capable of transmitting 100 horsepower and withstanding 100 per cent over-load. The chain was provided with Guiding Links, ran over sprocket wheels mounted on a heavy frame work, and was driven by a small motor connected up through a small chain drive.

The washers of the chain were removed from one side and a revolving shutter ingeniously arranged so that the rocking action of the joint could be followed as the chain went on and off the sprockets. In other exhibits, this drive has attracted considerable attention.

There were also other small drives, similar to those installed in elevators and mills for connecting individual motors to machines or for replacing gears for drives between parts of machines. The type of case this company are recommending and the method of lubrication was also shown.

The Morse Chain Company does not desire or recommend running their drives in oil baths as they find that best results are obtained by simply enclosing the drives to keep away lint and dust and to prevent the throwing off of grease. A non-fluid oil which will not throw off sparingly applied is found to give sufficient lubrication.

In the exhibit there were also a number of samples of different chains showing the Morse Rocker Joint from 1/2-inch pitch to 3-inch pitch, and in several widths, illustrating the chain as used for 1/2 horsepower up to 5,000 horsepower. Photographs of actual installations and results were also on exhibition and catalogues were freely handed out. F. G. Anderson, New York manager of sales, was in charge and representatives of the sales department and others were in attendance.

TRADE NOTES

C. A. Weaver, manager of the Minneapolis office of Sprout, Waldron & Co. of Muncy, Pa., has had the State of Wisconsin added to his territory.

The Strong-Scott Manufacturing Company of Minneapolis, Minn., has been reorganized with A. W. Strong, president; Phillip Little, Jr., vice-president and treasurer; L. S. Strong, secretary.

The Link Belt Company of Chicago, Ill., announces a practically uniform reduction of 10 per cent on malleable iron and steel ("SS" class) chains, sprockets, brackets, and other products, effective at once. Discounts will be furnished on application.

The Webster Manufacturing Company of Chicago, Ill., has in preparation a new catalog which will be replete with general information of a grain machinery character, and which will list all machines of the Webster make with a dimension drawing and comprehensive description. Naturally the work of compiling such a complete catalog as contemplated by the Webster Manufacturing Company requires time but it is expected to have it ready for distribution to the trade by the close of the current year.

"Monitor" machines were specified in the large order recently placed for the cleaning machinery for the rebuilt elevator of the Chicago & Northwestern Railroad Company at South Chicago, Ill., operated by the Armour Grain Company and under construction by the Witherspoon-Englar Company.

The contract included 20 No. 11 Monitor Oat Clippers, and 12 No. 9 Monitor Warehouse Separators. The Huntley Manufacturing Company of Silver Creek, N. Y., manufacturers of the Monitor line were greatly pleased on receipt of the order as they considered it a very high tribute for Monitor machines because of the fact that they were in use in the destroyed house and the operators knew absolutely the results that could be accomplished by them. The sale was made by A. D. McPherson, Chicago representative for the "Monitor" line.

There is probably nothing more interesting in the mechanical equipment of the grain elevator than the belt conveyor. Its steady, relentless activity, delivering products of the soil or mine through the long gallery or in the work house at the rate of 15,000 bushels per hour, is one of the most interesting sights in the modern grain storage plant. This subject of belt conveyors is treated by the Weller Manufacturing Company of Chicago in their new catalog C. About 58 pages are devoted to belt conveyors of various types and for various materials. A feature of the catalog is its adequate descriptive matter and profuse illustrations. The reader can readily find anything he wants and nothing is omitted that a complete compendium on belt conveyors would demand. Several pages are also given to different styles of self-propelling trippers and belt conveyor rolls. Write for catalog and add to your library of literature on Weller-made goods.

Chicago is Waiting for You

Grain Dealers National Association Holds its Annual Convention, October 3, 4 and 5 at Hotel Sherman, Chicago, and You Are Needed—Come

A SHORT time ago a professional bum went to sleep on top of a grain car headed for Chicago. The stopping of the car woke him up and he found himself out in the yards some 20 miles to the south of the loop, but well within the switching district. He was thoroughly indignant as he wanted to get to the heart of the city where panhandling is better. "This is the rottenest road I ever rode on," commented the bum, with oratorical embellishments which we cannot print. "This is the poorest service I ever saw in all my years of railroading, and I'll never travel on this road again as long as I live."

This is a warning. Every dealer in the country will want to come to the big silver jubilee of the Grain Dealers National Association which will be held at Chicago on October 3, 4 and 5. If you haven't any money, come on the rods, it will be worth the effort. But be sure you find out in advance the destination of the car you ride or you may be left on the outskirts with the mosquitos like the "professional" mentioned above.

But if you come in "on the velvet" of a regular Pullman, (perhaps some of you will come that way) you can probably walk to the hotel from the depot, or if it is raining you might take the hotel bus. But remember that the convention is to be held at the Hotel Sherman, and get the right bus—the other hotel has one at the depot too.

Well, now, here we are, all together at the hotel, a thousand or more of us. Recent conventions have shown from 1,200 to 1,500 in attendance. If this wasn't something out of the ordinary in the way of conventions, we would predict that the attendance might be less this year, but, believe me, it is going to be some convention. More fur will fly than has been visible at a meeting of the trade since the National was organized 25 years ago. More tragets have been put up to shoot at this year, in the way of problems, than ever before, and if you have any ammunition in your think magazine, the sharpshooting brigade of the trade needs it now. Come loaded and shoot at sight.

If you haven't been to Chicago for some time you will see some changes. There is a new bridge over the creek. You can see that when you go up to the Drake Hotel for the banquet. The Drake is on the north side of the creek. Then there is the new bank building going up right opposite the Board of Trade. Marshall Field's store has a new window trim, and there is a new flag over the post office. The town is all dressed up and worth seeing. You will be interested, too, in seeing the reservoir where the city gets its water. Its about 300 miles long and the water is guaranteed fresh every day. There is a statue of Abraham Lincoln

in the park. They say he was president a long time ago, but it was before my time. There are some other things to see too, but you can ask the sheriff about them. He likes to point out sights to visitors.

Now we've seen the town, we can get back to the convention. Here is the program:

MONDAY, OCTOBER 3
Morning Session, 9:30 O'Clock

Call to order by the president.

Congregational singing led by Fred W. Haigh, of Toledo, Ohio, with W. W. Cummings, of Toledo, at the piano. Each session of the convention will be opened by a few minutes of congregational singing led by Mr. Haigh. This is merely to start the sessions off with animation. Patriotic and popular songs will be sung.

Invocation.

Address of welcome on behalf of the Chicago Board of Trade—Joseph P. Griffin, president.

Response on behalf of the Grain Trade—E. C. Elkenberry, former president of the Grain Dealers National Association, Camden, Ohio.

Address—"Back to the Republic," Harry F. Atwood, Chicago, Ill.

President's annual address—B. E. Clement, Waco, Texas.

Report of Secretary-Treasurer—Charles Quinn, Toledo, Ohio.

MONDAY, OCTOBER 3
Afternoon Session, 1:30 O'Clock

Executive Committee—J. W. McCord, chairman, Columbus, Ohio.

Address—Hon. Medill McCormick, United States Senator from Illinois.

Note.—There will be a group meeting of feed dealers on the mezzanine floor of the Sherman Hotel to discuss the new feed rules which are to be presented to the convention later for adoption. This meeting will be held immediately following the address of Senator McCormick.

Transportation—Henry L. Goemann, chairman, Mansfield, Ohio.

Constitution and By-Laws—E. C. Elkenberry, chairman, Camden, Ohio.

(At the Minneapolis convention last year a committee was appointed to codify and revise the constitution and by-laws of the Association. This committee will submit the result of its labors for adoption by the convention. Printed copies of the new constitution and by-laws will be distributed among those attending the convention.)

TUESDAY, OCTOBER 4
Morning Session, 9:30 O'Clock

Address—Hon. Warren T. McCray, Governor of Indiana, and former president of the Grain Dealers National Association.

Special Legislative Committee—R. I. Mansfield, Chicago.

Legislation—A. E. Reynolds, chairman, Crawfordsville, Ind.

Uniform Grades—W. S. Washer, chairman, Atchison, Kan.

Committee on Rejected Applications—D. M. Cash, chairman, Decatur, Ill.

Telephone and Telegraph Service—F. G. Horner, chairman, Lawrenceville, Ill.

TUESDAY, OCTOBER 4
Afternoon Session, 1:30 O'Clock

Address—David R. Forgan, President of the National City Bank, Chicago, Ill.

Trade Rules—F. E. Watkins, chairman, Cleveland, Ohio.

Note.—Following Mr. Watkins' report, E. C. Dreyer, chairman of the Feed and Grain Joint Committee, will present the new feed rules for adoption. This Feed and Grain Joint Committee was created at the Minneapolis convention. It has formulated rules to govern all transactions in feeding stuffs. Heretofore there have been no uniform feed rules. Printed copies of the feed rules will be distributed among those attending the convention.

Milling and Grain Joint Committee—Frank Kell, chairman, Wichita Falls, Tex.

WEDNESDAY, OCTOBER 5
Morning Session, 9:30 O'Clock

Address—"Origin and Effect of Freak and Class Legislation," John B. Maling, New Haven, Ind.

Membership—E. F. Huber, chairman, Minneapolis, Minn.

Presentation of Booster Prizes.

Address—"The Pure Food Law as It Applies to the Adulteration of Grain,"—Dr. R. E. Doolittle, of the Bureau of Chemistry, Washington, D. C.

Arbitration Appeals Committee—Elmer Hutchinson, chairman, Arlington, Ind.

Arbitration Committee No. 1—C. D. Sturtevant, chairman, Omaha, Neb.

Arbitration Committee No. 2—F. B. Bell, chairman, Milwaukee, Wis.

Arbitration Committee No. 3—S. L. Rice, chairman, Melanora, Ohio.

Arbitration Committee No. 4—E. W. Crouch, chairman, McGregor, Tex.

Arbitration Committee No. 5—H. C. Gamage, chairman, Kansas City, Mo.

Arbitration Committee No. 6—I. C. Sanford, chairman, Portland, Ore.

WEDNESDAY, OCTOBER 5
Afternoon Session, 1:30 O'Clock

Merchant Marine—C. B. Fox, chairman, New Orleans, La.

Crop Reports—E. J. Smiley, chairman, Topeka, Kan.

International Relations—W. B. Bashaw, chairman, Montreal, Canada.

Hay and Grain Joint Committee—Robert B. Clark, chairman, Chippewa Falls, Wis.

Unfinished Business.

Election and Installation of Officers.

New Business.

Adjournment.

Perhaps you don't realize all the good things



TRADING FLOOR ON THE CHICAGO BOARD OF TRADE

this program contains. Formal titles don't mean much. Right off the bat Joe Griffin, will have something to say. He is going to give the address of welcome, but don't get the idea that it will be just a mess of pretty platitudes. The largest grain exchange in the world doesn't elect that kind of a man for president in such strenuous times as these. Mr. Griffin is a big man who knows conditions and who also knows economic fallacies and is willing to fight them. He's a two-fisted man and will use them both for what he considers right.

You all know E. C. Eikenberry and President B. E. Clement and Charlie Quinn. They can all handle rough lumber without gloves, and it is safe to say they will do it on this occasion, for there is an abundance of rough lumber that will have to be cleared away before the grain trade can build on its foundation of normal business and sound principles. It means this: Be on the job when the first session is called to order, not in the hotel lobby, but in the convention hall.

Did you ever hear Senator Medill McCormick? He is a fine speaker, a sound thinker, and a big man in politics who is just starting a career that will be worth watching. Another of the same kind is Governor McCray of Indiana. He is a business man, been in the grain business all his life and was the second president of the National Association. He is a banker, stockman, and several other things, and is only incidentally a politician. Indiana needed a business administration, so she selected about the best exponent of business she had.

David R. Forgan is of Scotch blood and sound American ideals. He knows his way around a bank as you do around a wagon scale. A fake eco-

at the Cincinnati meeting on June 27 last. At this meeting plans were laid to educate the farmer in the economic importance of the middlemen. A campaign for this purpose has been started and a branch office of the Association opened in Chicago.

The Chicago convention will be called upon to consider the new trade rules covering transactions in feeding stuffs. It will also be asked to pass judgment on the new constitution and by-laws of the Grain Dealers National Association.

There is no intention of "making Jack a dull boy" at Chicago. It will not be all work. For instance, the Board of Trade has bought up the Op'ry House for Monday night and everybody will get a ticket to see Fred Stone in "Tip-Top." Fred is a comical cuss and he has a swell troupe, girls and everything. You and your wife are both invited.

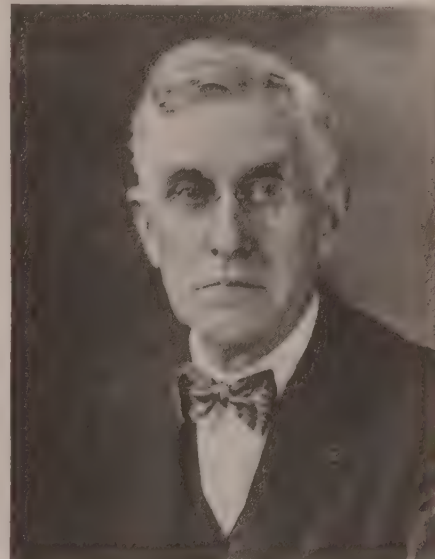
On Tuesday morning the ladies will be taken for a buggy ride at 10 o'clock. They will stop at the Edgewater Beach Hotel for lunch, and there will be a special entertainment for them there. When they get back to the hotel they will just have time to powder their noses before going to the banquet at the Drake. The Drake is our newest inn, and the country doesn't have anything better. The banquet is for both ladies and members and will be something to remember.

Chicago hasn't entertained the National Association for 11 years, and intends to make this occasion remembered. Besides it's the silver anniversary of the organization and a real celebration is in order. You can depend upon it that every feature of the convention will be well taken care of, for President Griffin has appointed real talent on the committees that will oversee the job. Look

rates are on the certificate plan and apply to all members of the Association and all dependent members of their families. The following directions are submitted for the guidance of those who come:

1. Tickets at the regular one-way tariff rate for the going journey may be obtained on any of the following dates (but not on any other date) September 29, October 5. Be sure that, when purchasing your going ticket, you request a certificate. Do not make the mistake of asking for a "receipt."

2. Present yourself at the railroad station for



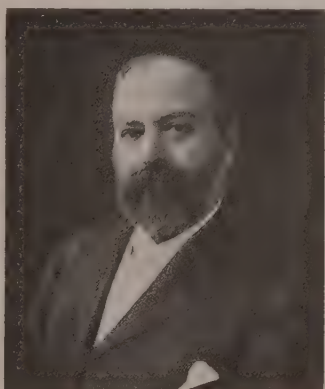
J. J. FONES
General Chairman Convention Committee

ticket and certificate at least 30 minutes before departure of train on which you will begin your journey.

3. Certificates are not kept at all stations. If you inquire at your home station, you can ascertain whether certificates and through tickets can be obtained to place of meeting. If not obtainable at your home station, the agent will inform you at what station they can be obtained. You can in such case purchase a local ticket to the station which has certificates in stock, where you can purchase a through ticket and at the same time ask



JOHN H. WHEELER
Badge Committee



HIRAM N. SAGER
Speakers Committee



EDWARD HYMERS
Theatre Committee

nomic blurb has as much chance of getting by Mr. Forgan as a Chicago policeman has of stopping bootlegging. He can tell you a lot of things you don't know and that will mean dollars and cents to you to hear.

Then there is Dr. R. E. Doolittle. He took the place of Dr. Ahlsberg at the head of the U. S. Bureau of Chemistry. Do you know anything about adulterating grain? Ever hear of watered oats? Dr. Doolittle knows several ways to do the job and he also knows that "The goblins 'll git ye if ye don't watch out."

But this isn't all either. There is going to be a banquet on Tuesday night. It won't be any cold ham church supper, you can bet on that. And in addition to the chow, Frank O. Lowden, former governor of Illinois and pretty near President of the U. S., will speak. Mr. Lowden makes words work for him as well as anyone you ever heard. He is also on speaking terms with some real ideas and his address will be worth coming from Seattle to hear.

On this banquet program will also be Asbury F. Lever, former chairman of the House Committee on Agriculture, and now a member of the Federal Farm Loan Board. Mr. Lever knows a thing or two about agricultural conditions and will have something to say on the subject, "Adequate Credit Necessary to Orderly Distribute Farm Products."

The report of the chairman of the various committees will be of more than usual interest this year. This is especially true of the chairman of the special legislative committee which was created

over these names and have faith. Here are the chairmen of the committees:

Chairman, J. J. Fones of E. W. Wagner & Co.

Vice-Chairman, Geo. E. Booth of Lamson Bros. & Co.

Finance, George Marcy, president of the Armour Grain Company.

Banquet, David Noyes, of Noyes & Jackson.

Speakers, H. N. Sager, of J. H. Dole & Co.

Entertainment of visiting ladies, John Kellogg, of the Armour Grain Company.

Theatre, Edward Hymers, of Jackson Bros.

Badges, John H. Wheeler of Rumsey & Co.

The Executive Committee will be responsible for the whole works and will see that each committee does its chores properly. Here it is: J. J. Fones of E. W. Wagner & Co., chairman; E. A. Doern of the Pope & Eckhardt Company; H. N. Sager of J. H. Dole & Co.; J. C. Murray of the Quaker Oats Company; F. B. Rice of the Star & Crescent Milling Company; R. A. Schuster of Rosenbaum Brothers; E. R. Bacon, Jr. of E. R. Bacon Company; John Kellogg of the Armour Grain Company; G. W. Hales of the Hales & Hunter Company; and F. F. Breckenridge of the Nye-Jenks Company.

With these men working on the job and with the generous financing that the Chicago Board of Trade has done, there are great possibilities for this convention, and they will all be realized.

Now a word in regard to railroad fares (those who don't come by freight). Every passenger association in the country has granted fares of a fare and a half for the round trip. The reduced



GEO. E. BOOTH
Vice Chairman Convention Committee

for and obtain a certificate to the place of meeting.

4. Immediately on your arrival at the convention hotel present your certificate to the endorsing officer, W. K. Vandiver, as the reduced fare for the return journey will not apply unless you are properly identified as provided for by the certificate.

5. It has been arranged that a special agent of the carriers will be in attendance on October 2-5, from 8:30 a. m. to 5:30 p. m., at the Hotel Sher-

man, convention headquarters, to validate certificates. If you arrive at the meeting and leave for home again prior to the special agent's arrival, or if you arrive at the meeting later than October 5, after the special agent has left, you cannot have your certificate validated and consequently you will not obtain the benefit of the reduction on the home journey. It is inferred that you will wish to attend all the sessions of the convention, and that you will if possible, be present commencing the opening date of the meeting. However, so far as the validation of certificates is concerned, you should so time your going trip as to enable you to present certificate for validation prior to departure of the special agent of the railroads on the last validation date above named, for, while provision is made for validation of certificates if the required minimum of 350 are presented, as explained in the next paragraph a reduced fare ticket on the return trip is obtainable only upon surrender of a validated certificate. Certificates will be validated only on the dates above named, and during the office hours indicated. No refund of fare will be made on account of failure to either obtain a proper certificate nor on account of failure to have the certificate validated.

6. So as to prevent disappointment, it must be understood that the reduction on the return journey is not guaranteed, but is contingent on an attendance of not less than 350 members of the organization at the meeting and dependent members of their families, holding regularly issued certificates obtained from ticket agents at starting points, showing payment of regular one-way tariff fare of not less than 67 cents on going journey.

7. If the necessary minimum of 350 certificates are presented to the special agent, and your certificate is duly validated, you will be entitled up to and including October 8, to a return ticket via the same route over which you made the going journey, at one-half of the regular one-way tariff fare from the place of the meeting to the point at which your certificate was issued.

8. Return ticket issued at the reduced fare will not be good on any limited train on which such reduced fare transportation is not honored.

To those living near Chicago this certificate may not mean much, but to those coming from Boston or Seattle or Waco, Texas, it means plenty. As

REMARKABLE GROWTH IN A RAILROAD'S GRAIN BUSINESS

The Western Maryland Railroad runs through some of the finest sections of Pennsylvania and Maryland. The Cumberland Valley is noted for its beautiful scenery and this wonderful land of the Civil War is dotted with thriving farms and growing hamlets and is claimed by the inhabitants to be one of the garden spots of the earth. The



MANAGER J. A. PETERSON

Western Maryland has contributed much to the growth of this territory but it is to the railroad as a grain dealer that this article would direct attention.

Whether it is in its resources or just natural ability, the Western Maryland has made remarkable strides as a grain merchant. For instance, it built the Western Maryland Elevator at Port Covington, Baltimore, Md.; in 1916. It had a capacity of 1,000,000 bushels and was designed and constructed by James Stewart & Co., Inc., of Chi-

were quickly outgrown so that in one year a new contract was placed with James Stewart & Co., for an additional storage of 1,000,000 bushels. For a while this was adequate but still the road's business grew and now, after five years, the same Chicago construction firm has the contract for addition tanks of 1,500,000 bushels which will bring the total storage up to 3,500,000 bushels.

There will also be a 50 per cent increase in the capacity of the work house and 30 per cent increase in capacity of the shipping gallery. The new tanks, or rather the complete elevator as it will appear when finished, is shown in our illustration.

The new addition includes 36 tanks and 10 interstices in the first group and 16 tanks and 10 interstices in the second group, with 100,000 bushels added to the work house. There will also be a stairway added outside the structure and new passenger elevator within. There will be also a considerable increase in the capacity of the Hess and Morris Grain Driers with which the plant is equipped. The railroad is doing 50 per cent of the grain business of Baltimore today; with the new improvements this ratio will naturally increase.

A word must be stated of the manager of the Western Maryland Elevator, whose reputation has grown with the road's grain business. J. A. Peterson came out of the West. He left the J. Rosenbaum Grain Company, in 1916, to accept the position of manager of this elevator and there are hardly enough adjectives in the lexicon to do justice to his ability. His middle name is efficiency and hard work. In short he is on the job night or day whenever it is necessary and at other times besides. Mr. Peterson had made many friends in the East so that he now can count them in all parts of the country.

PEACE RIVER WHEAT

For some years now reports of the wheat raising capabilities of the Peace River district in northern Alberta have been read with surprise by those who did not realize that the northern limit of wheat culture has advanced five or six hundred miles. This year samples of wheat, oats, barley and rye have been exhibited at Edmonton and Winnipeg, all of an unsurpassed quality. They were grown



WESTERN MARYLAND ELEVATOR AT BALTIMORE, MD., SHOWING ADDITIONS ABOUT TO BE BUILT

350 certificates have to be presented before the half fare return ticket is issued be sure you get one from your station agent before leaving home. If you are in a small town you better speak to the station agent ahead of time so he can get certificates if he is not already supplied.

Come to the meeting—the Association wants you and needs you. Let George run the business for a few days, and see for yourself that Chicago and its Board of Trade have a brand of hospitality that will warm your heart. Old friends will be here to greet, new acquaintances will be made and the three days will pass like as many hours.

cago. To say a word of its facilities, it rivaled the famous Girard Point Elevator at Philadelphia, Pa., built by the same company. It could receive and unload 120 cars of grain in 10 hours and load 140 cars during the same period. Boats could be loaded at the rate of 60,000 bushels per hour and the total handling capacity per year was approximately 30,000,000 bushels of all kinds of grain.

Now, here is where the Western Maryland Railroad demonstrated its practical ability as a successful grain merchant. Business began to increase. In fact under the management of the road it developed so rapidly that the early facilities

on the Government experimental farm at Fort Vermillion and were exhibited to prove the excellence of the soil and its capacity for the production of grain and flax. Albert Laurence has given some details of the growth of a plot of Marquis wheat this year. It was sown May 1. On May 16, the plants were 1½ inches high. On May 23, the plants were 4 inches high; on June 6, 9 inches; on June 20, 22 inches; and on July 4, 35 inches. That was not the limit of growth, nor the date of ripening, but it is an astonishing growth for 50 days. The long summer days of northern Canada, nearly 20 hours, do wonderful things to growing plants.

THE NORTH WESTERN ELEVATOR EXPLOSION

(Continued from Page 180)

house. The marine leg housed in this tower had a capacity of 20,000 bushels an hour. Four ship shovels with the necessary equipment for operating them were provided to assist in unloading the vessels. The marine leg delivered the grain to a garner in the tower which discharged it through a scale to a receiving garner and onto a belt conveyor which carried it to the river house where it was elevated and sent to any section of the elevator. A 36-inch belt conveyor running under the wharf along the east side of the river house received grain from the shipping bins and carried it to the shipping gallery for delivery to boats.

The power house, a brick building 86x140 feet, located about 33 feet north of the west end of the storage section, was equipped with six 500 h. p. boilers, two 1,500 and one 500 K. W. turbo-generators to produce the electric power used in the elevator. The power house also contained the fire pumps, boiler feed pumps, air compressors, storage batteries and equipment for heating the plant and supplying hot and cold water to the welfare building and offices. Four hundred tons

plant over night. Communications between this office and the main office in Chicago was provided for by telephone.

STORY OF THE EXPLOSION

Newspapers throughout the country published stories of the explosion, but due to the lack of authentic information many of the early reports were exaggerated. Some of these reports stated that more than 100 had been killed and the property loss was estimated as high as \$10,000,000. Other reports claimed that the Calumet River had been dammed by grain and debris and the water had flooded the territory around the elevator.

The time at which the explosion occurred has been set at about 6 o'clock, possibly a few minutes after the hour, and at least two separate and distinct explosions occurred, with the last and heavier one about 10 seconds after the first. The first explosion must have been quite heavy but small in comparison with the second or final blast which wrecked the greater part of the plant. An engineer living near the elevator reports that he heard a number of smaller explosions like rapid gun fire between the two heavier explosions.

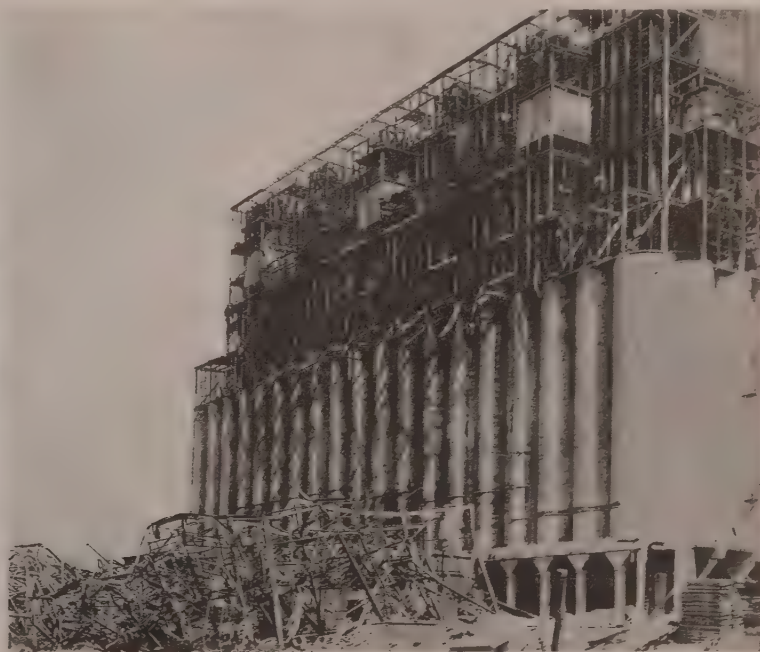
The day shift, with the exception of a few drier-men who remained to complete the drying of some

curred. Two sections of driers continued in operation until 4:30 in the afternoon. A number of painters, employed in repainting the steel work around the plant, and the regular force of elevator employes on the day shift with the exception of a few employed in the drier, left the elevator at noon. The drier-men left between 4:30 and 5 o'clock, after the driers were shut down.

The night force when they reported for work about 4 o'clock started cleaning the driers. This work consisted of brushing down the dust around the garner above the driers and removing all foreign material such as sticks, pieces of burlap etc., which would not go through the grating in the bottom of the garner. The driers were also to be brushed down and given a thorough cleaning and a force of men was expected to complete on Sunday the part of this work not finished by the night force. It was brought out during the investigation that there had been a fire in the driers the Saturday previous to the explosion. This fire was first discovered about 5:00 a. m., and it was thought to have been extinguished. However, it broke out again about 3:00 p. m. of the same day and was extinguished by use of a hose line. Another fire was reported to have occurred in the



THE NORTHEAST CORNER OF THE PLANT AFTER THE EXPLOSION. AS IT APPEARED FROM ACROSS THE CALUMET RIVER



THEN SOUTHWEST CORNER OF THE PLANT AFTER THE EXPLOSION. SHOWING THE WORK HOUSE AND WRECKAGE OF THE DRIERS AND TRACK SHED

of coal could be carried in bunkers over the boilers. Besides furnishing steam for generating power the boilers supplied steam to the driers and bleachers. A 200-foot brick chimney supplied draft for the boilers. Water was obtained for the boilers from the Calumet River.

A shop building 82x32 feet, constructed of brick and divided into a machine shop and a carpenter shop, was located north of the storage section of the elevator and east of the power house. This unit of the plant was equipped with machinery for making repairs at the elevator. Just north of the shop building the company built a steam heated garage. East of the shop and 30 feet north of the eastern end of the storage section was the welfare building, a two-story brick structure 82x65 feet. This building contained a kitchen with pantry and cold storage, a large dining room, lockers, toilets and showers on the first floor, while the second floor contained a private dining room and two large bunk rooms with sleeping accommodations for the employes.

About 45 feet north of the work house was the office, a three-story brick building 42x58 feet with large window areas. This building contained the sampling and testing departments on the first floor and the offices on the second floor. In connection with the general office a private office was provided for the superintendent. Sleeping accommodations were also provided in the building for the superintendent, officers of the company or visitors when they found it necessary to stay at the

grain, left the elevator when it was shut down about noon. Painters and repairmen working at the plant also left at noon. The men of the day shift who remained at the elevator during the afternoon left the plant about 5 o'clock, or soon after the driers had been shut down. The night shift of six men came on the job about 4 o'clock and were the only employes in the elevator when the explosion occurred. All of these men were killed.

Windows were broken in business houses and residences five miles from the elevator. The shock was felt for many miles and was strong enough to shake buildings more than a mile from the plant. Reports state that the shock was distinctly felt in Benton Harbor, more than 50 miles away on the eastern shore of Lake Michigan, where windows were rattled by the blast. Persons 100 miles away reported hearing the explosion. The condition of the elevator as found at the time of the investigation indicates that the blast must have been terrific and the force of the explosion tremendous. Undoubtedly the isolation of the plant and the fact that the explosion occurred after many of the men had left the elevator prevented a much greater catastrophe than actually occurred.

INCIDENTS PREVIOUS TO THE EXPLOSION

It is interesting to note several incidents previous to the explosion which possibly had some bearing on the cause of the disaster. The elevator, with the exception of the driers, had been shut down at noon of the day the explosion oc-

boot of one of the shipping legs about one month previous to the explosion.

WEATHER BUREAU REPORTS

As shown above, there were probably a number of times when the spark or flame necessary to start a dust explosion was present in the North Western Elevator, but due to the fact that other conditions were not right no explosion occurred. Experiments have shown that to produce an explosion it is necessary to have a sufficient quantity of dust in suspension in the air with certain limits on the size of the dust particles and the moisture content of the dust, and a spark or flame to ignite the dust cloud.

Previous observations have shown that a large majority of the explosions investigated have occurred at times when the temperature is unreasonably high and the relative humidity low. These observations have again been borne out by the reports of the Weather Bureau Station at Chicago as given below:

WEATHER CONDITIONS

Relative Humidity			Temperature		
Date	7 A. M.	Noon 7 P. M.	Date	7 A. M.	Noon 7 P. M.
3/15/21	91	84 69	3/15/21	54.6	63.1 51.0
3/16	46	68 64	3/16	35.9	41.2 42.8
3/17	86	64 95	3/17	42.8	56.2 37.6
3/18	93	90 56	3/18	27.9	43.8 59.7
3/19	88	67 58	3/19	60.1	73.3 72.5
3/20	89	83 97	3/20	64.1	72.8 66.
3/21	91		3/21	40	

It will be noted that on Saturday, March 19, the temperature was exceptionally high, while on

Friday, the 18th, and Saturday, the 19th, the relative humidity was comparatively low for that season of the year.

CONDITION OF THE ELEVATOR

Reports on the dust condition of the elevator just previous to the explosion differ considerably. To one unfamiliar with general conditions in grain elevators as they are at present operated, and ignorant of the amount of dust created during the handling of grain, the North Western Elevator seemed dusty, while others accustomed to working in plants of this kind considered the elevator clean.

An inspector for the Chicago Board of Underwriters, who had visited the elevator Tuesday previous to the explosion, reported the plant in fair condition, which indicated that as far as fire hazards were concerned conditions were satisfactory. However, this inspection covered only conditions which would have some bearing on the starting of a fire in the plant and was not intended to cover dust explosion hazards. From all reports obtained it is assumed that dust conditions at the North Western Elevator were about the same as at the average terminal elevator. Under present regulations prohibiting the application of suction to the grain for the removal of the dust previous to weighing, it is practically impossible to prevent the accumulating of dust about a large elevator.

As has been stated above, workmen were busy cleaning a section of the plant at the time the explosion occurred. In brushing down the walls, beams, ledges, etc., about the plant large quantities of dust were naturally thrown into suspension. This fine dust which remains in the air as a dust

cloud needs only a spark to start the initial explosion which stirs up other dust through which the flame propagates.

The cleaning process had been going on for about two hours before the explosion occurred and undoubtedly a large quantity of dust had been thrown into suspension. It has been shown that weather conditions were about the same as prevailed at the time previous explosions occurred. It was also shown that at times sparks were produced and small fires occurred in the elevator. Apparently all these conditions which are necessary before a dust explosion can occur prevailed at about 6 o'clock Saturday evening, March 19, and the original dust ignition fed by dust in the elevator developed into the disastrous explosion which wrecked the plant.

DAMAGE TO ELEVATOR

Since the North Western Elevator was the largest plant of its kind in the world it would be natural to suppose that the explosion which wrecked it was the most violent explosion of dust that had ever occurred. This supposition is correct. Although the loss of life in other explosions has been greater than at the North Western Elevator, and the destruction may have been more complete in other plants in which dust explosions have occurred, the blast which wrecked this huge modern grain handling plant was without doubt the most violent.

The explosion of starch dust which wrecked the large plant of the Douglas Starch Company at Cedar Rapids in May, 1919, caused the loss of 43 lives and property damage amounting to \$2,194,700. In this case the destruction was perhaps more complete than at the North Western Elevator, due to the fact that a number of the buildings at the starch works were of brick and frame construction.

In the elevator explosion at Port Colborne, Ontario, in August, 1919, 10 men lost their lives and the property loss was estimated at \$750,000. The explosion at the Murray Elevator in Kansas City in September, 1919, caused the loss of 14 lives and property damage amounting to \$465,000. In each of the two elevator explosions mentioned above the loss of life was greater than at the North Western Elevator, but this is due, probably, to the fact that the plant at South Chicago was not in operation and only a few men were at work, for every man in the elevator was killed.

In no previous explosion has the tremendous force which may be produced by a dust explosion been so evident as in this case in which a modern grain handling plant of reinforced concrete and structural steel was so extensively damaged. Words and pictures are inadequate to describe the force of the explosion or the damage to the elevator.

The river house was probably more extensively damaged than any other section of the plant. It is the opinion of some of the investigators that this part of the elevator was almost blown into the river by the explosion. As the close up picture of the river house foundation shows, every piece of concrete construction within sight has been cracked, broken, or blown out entirely. Noth-



BINS ON THE EAST SIDE OF PLANT FACING THE RIVER HOUSE WERE ALSO BLOWN OUT

ing except the wharf wall remains undamaged in its original position. A number of the river house bins at the south end of the house were blown out. Steel and concrete were torn apart by the explosion and debris hurled across the river. Other bins of the river house were cracked, foundation walls were cracked and steel work in the cupola bent out of shape. It will probably be necessary to tear down this entire section of the plant in order to rebuild. The marine tower was wrecked. Some of the machinery will be salvaged but the structural steel frame work and the marine leg will probably have to be rebuilt entirely.

At first sight the storage section did not appear to be seriously damaged with the exception of the storage bins blown out at the southeast corner. However, closer inspection showed that the damage was more extensive. The explosion in the tunnels under the storage bins was apparently very violent. It is almost unbelievable that an explosion of grain dust would produce sufficient force to lift these huge concrete storage tanks from their foundations, but evidently this is what happened. Sixteen of the cylindrical bins at the southeast corner of the storage section were blown to pieces and sections of others blown out.

At the northeast corner of the storage section the results were different. At this point the bins, a number of them full of grain, were lifted from their foundations and moved from their original

position. Approximately 40 bins at this corner of the storage section were moved nearly half a foot north and east of their original position. Cracks showing between other bins and their foundation piers indicate that they were also lifted by the explosion. The tanks and the grain they contained would probably weigh 300,000 tons. This gives some indication of the tremendous force of the explosion. The structure above the storage bins was totally destroyed. A part of the steel frame work which supported the roof remains but it is so bent and twisted that it is unfit for further use and will have to be replaced.

The work house was perhaps the least damaged of the elevator buildings. The equipment and lighter parts of the structure were destroyed or severely damaged but the bins and supporting columns appear to be in good condition. The columns and foundation wall at the south end of the work house were blown out but this does not affect the main supporting columns under the bins.

The concrete slabs forming the first floor of the work house were blown up and completely destroyed, but only a few of the floor beams have been damaged. Many of the cross braces between the first floor columns were damaged by flying debris. All of the machinery on this floor has been blown from its original position and probably damaged beyond repair. Some of the work house bins were damaged at the top and on the east side of the house several have been blown out.

Most of the elevating legs were destroyed but some of the elevator heads remained intact and steps were taken at once to repair one of the legs



DAMAGE DONE TO BUILDING NORTH OF THE ELEVATOR

that was the least damaged in order to remove the grain from the house. It was necessary to straighten and replace the steel plates forming the leg, replace the section of belt destroyed at the boot, and rebuild entirely the lower part of the leg below the bins.

The cupola of the work house was originally built with light walls of gunite and when the explosion reached this section of the house little resistance was offered. The result was that the equipment in the cupola and the frame work itself show little damage compared to the destruction in other sections of the plant. The force of the explosion, however, was sufficient to push over the concrete bleaching towers along the east wall of the cupola. These towers fell on the top of the storage section.

The drier house and the track shed, which were practically a part of the work house, are a total loss. As shown in the photographs of the wreckage in front of the work house, scarcely a piece of structural steel which helped to form the frame work of this part of the plant can now be found in its original shape. Steel columns were broken, beams and girders were twisted into queer shapes and the heavy girders over the receiving pits with box cars still on the rails were lifted and hurled with the entire mass of twisted steel about 15 feet from their original position. In falling the drier gars which were on a level with the work house bins turned in towards the bins and settled into what was formerly the basement of the track shed.

The sulphur storage house south of the work house was damaged by the explosion and the large pipes carrying the dust from the fans to the cyclone collectors on the roof of the dust house were blown away. Little damage was done to the dust

house itself, but the cyclones on the roof were dented by flying debris.

In the brick office building north of the work house all windows were broken or blown out entirely and the walls and roof were struck some heavy blows by flying pieces of concrete. Considerable repair work will be necessary to restore the building to its previous condition, but the walls apparently are still solid and only a small amount of replacement will be necessary.

The power house was extensively damaged by the explosion and by debris blown from the top of the storage section. This building, located north of the western end of the storage section, probably received its first shock from the explosion between the work house and storage section and in the tunnels under the storage bins. The steel and concrete blown from the top of the elevator onto the roof of the power house caused the most damage. Quite a large part of the power house equipment was destroyed or irreparably damaged, but the larger machines can probably be put in service again after certain repairs and adjustments are made. Large sections of the walls of this building will have to be rebuilt. The top of the brick chimney was damaged by falling debris and about 12 feet will have to be rebuilt.

The shop building located east of the power house and the garage north of this building were severely damaged by falling debris and considerable work will be necessary to restore them to their original condition. Certain parts of the walls remain standing but the roofs have been destroyed.

The welfare building was damaged to such an extent that it will be necessary to rebuild all except the front or north end of this structure. One of the photographs accompanying this report shows the damage to the south end of this building caused by the concrete and steel which was blown from the top of the storage section.

The shipping gallery which had never been used, was damaged very little by the explosion, probably due to the fact that no dust had accumulated in it. The only part of the gallery destroyed was the section adjoining the river house where dust had probably drifted into it from other sections of the plant. The pictures show the wall of the gallery blown away at this point.

ORIGIN OF THE EXPLOSION

Practically all reports stated that the explosion originated at the west side of the elevator and the investigation substantiated these statements. In tracing the various paths followed by the explosion through the tunnels and into various sections of the plant it was found that these paths centered at a point in the basement of the work house close to the western side where the track shed and driers joined the work house and about the sixth bay from the north end of the house where one of the drier legs was installed. This point is about one-third the length of the house measuring from the northern end.

This evidence does not indicate necessarily that this was the point where the dust was first ignited, but shows that this is the point where the flames met the first large dust cloud, and the first large explosion occurred. The first ignition of the dust may have been at a point some distance from this location just as a fire brand may be thrown or blown into a pile of combustible material from a point some distance away. The following facts, which were taken into consideration in determining the point of origin, or point at which the first heavy explosion occurred, can perhaps be shown best by reference to the attached chart showing the plan of the first floor of the work house and the tunnels under the storage section with numbers showing the various points at which evidence indicating the path of the explosion was noted:

1. Indicates points at which the beams and girders supporting the first floor of the work house were forced down showing that there was pressure from above probably due to a minor explosion in this end of the work house.

2. Indicates points at which the cross braces between columns on the first floor of the work house were forced up and towards the south, indicating pressure from below and from the north. A num-

ber of these braces showed signs of having been struck by heavy objects, probably pieces of concrete or machinery blown from other sections.

3. Indicates points at which the outer or western part of the cross braces between columns on the first floor of the work house were forced up and towards the south, showing that the pressure here was from below and from the northeast.

4. Indicates the point at which the floor beam was forced down more than any of the others surrounding it.

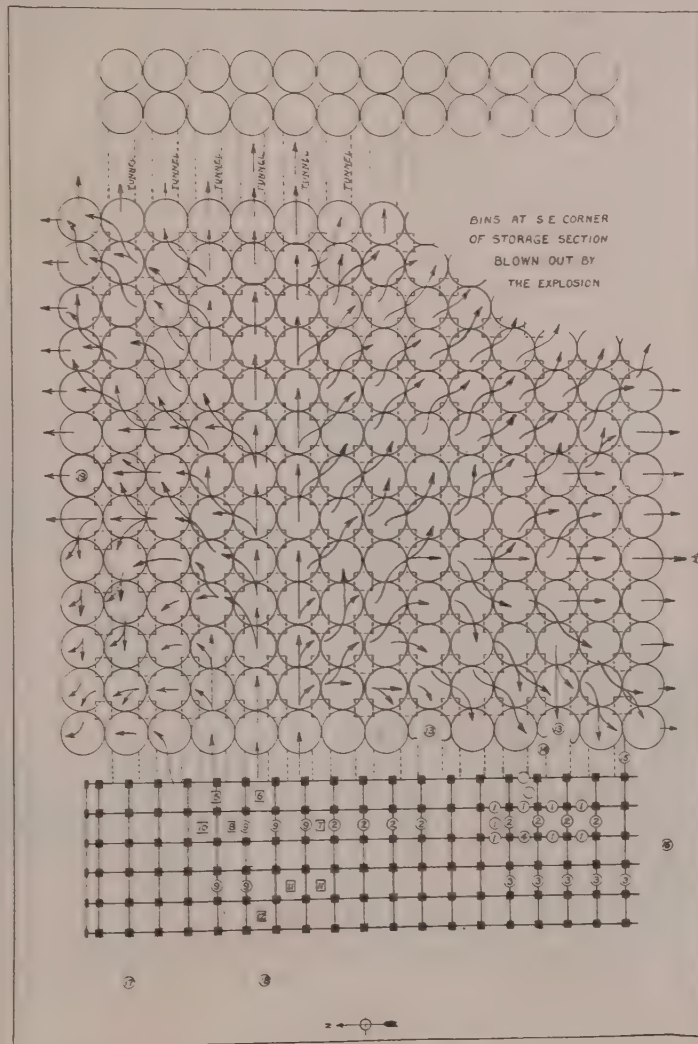
5 and 6. Indicate clippers which were blown in opposite directions: Number 5 being blown towards the north, while number 6 was pushed towards the

tion was blown out by pressure under the storage section.

15. Indicates the point at which one of the beams between the work house and the storage section has been forced down and towards the south, indicating pressure from above and from the north.

16. The row of columns at the south end of the work house was blown out by pressure on the first floor. The position of the basement wall below the columns indicates that it had been blown out by an explosion in the basement before the columns fell.

17. At this point the steel framework supporting the tracks over the receiving hoppers was lifted from the concrete piers and carried with the box



A CHART OF THE EXPLOSION

south. There are no signs of extreme violence between the machines but they appear to have been tilted and dropped into their positions by a raising of the floor between them.

7. Indicates an elevator leg which has apparently been forced in by pressure from the west.

8. Indicates an elevator leg in which there was evidence of a slight internal explosion.

9. Indicates points at which the cross braces between the columns on the first floor of the work house were forced up by pressure from beneath.

10. Indicates the elevator shaft with evidence of pressure from below jamming the shaft with twisted steel and debris.

11. Indicates legs which were apparently blown in by pressure from the west.

12. Indicates the drier leg which was practically destroyed on the first floor and shows signs of fire and intense heat on the bin floor. Surrounding spouts in the cupola of the work house also show signs of intense heat on the sides adjacent to this leg.

13. Indicates bins of the storage section blown in from the northwest by pressure from the first floor of the work house, or the area between the work house and the storage section occupied by the dust collectors. These bins were not blown in above the ceiling of the first floor of the work house.

14. Indicates the point at which the bin founda-

cars which had been standing in the track shed, about 12 feet west of its original position.

18. At this point the frame work of the track shed was forced about 15 feet west of its original position.

19. The bottom of this tank, the seventh from the northwest corner of the storage section, was blown out by pressure from above after the equipment in the tunnels under the tanks had been wrecked. The entire block of tanks at the north east corner of the storage section was forced about half a foot north and east from this point.

Arrows show the course which the explosion probably followed in spreading through the tunnels and around the piers under the storage section. The evidence indicates that it probably spread north and south from the sixth tunnel, counting from the north end of the plant. There were plenty of openings through which the flames could propagate from the basement or first floor of the work house to the cupola.

Evidently the explosion reached the bin floor near the point where the drier leg previously referred to came up through a leg bin, since the floor has been blown upward at this point. It propagated throughout the work house cupola from this point and spread into the storage section, where it followed the belt conveyors running over the fourth and fifth rows of bins (counting from the north)

side of the house), and spread in a fan shape to the north and south, probably reaching its greatest intensity at the southeast corner of the storage section where the 16 storage bins were blown out.

The explosion entered the river house through the tunnels leading from the basement of the storage section and through the bridges leading to the river house from the tops of the storage bins. The marine tower was probably forced into the river by the explosion which blew out the southeast corner of the storage section.

THEORIES ADVANCED AS TO CAUSE OF THE EXPLOSION

As is usual in disasters of this kind, a number of theories regarding the possible causes of the explosion were advanced, but the facts brought out during the investigation did not substantiate many of them. The principal theories advanced were:

1. Smoking in the elevator
2. Use of oil lanterns in the elevator
3. Bomb placed in the elevator
4. Short circuit in the electric wiring
5. Spontaneous combustion
6. Fire in one of the cleaning machines
7. Ignition of dust on electric lamps
8. Broken electric lamp globes
9. Fire in drier.

The facts brought out in hearings following the explosion, substantiating or eliminating from fur-

ered, and this theory was therefore eliminated.

4. *Short Circuit in the Electric Wiring.*—Due to the condition of the elevator after the explosion, it was practically impossible to obtain any information bearing on the theory that the explosion was caused by a short circuit in the electric wiring. All wiring throughout the plant was in conduit and had been regularly inspected and reported in good condition. Extension lights or portable lamps on long cords were used throughout the elevator and it is reasonable to suppose that dragging these lamps from place to place, as is common in plants of this kind, wore off the insulation. In the hearings following the explosion the electrician at the elevator reported that he kept close watch on all equipment of this kind and to the best of his knowledge all extension cords were in good condition. The workmen at the elevator, when the explosion occurred, were engaged in cleaning the garner over the drier and did use extension cords for this work. The original ignition of the dust by sparks due to a short circuit in one of these cords may be considered as possible, but not a probable cause of the explosion.

5. *Spontaneous Combustion.*—Spontaneous combustion, the usual theory advanced when the real cause of a fire is unknown, was given in this case. It is known that oily waste will ignite spontaneously and certain prepared feeds and grain dust when

combustible material on the floor. It is claimed that fires have been started in mills and elevators in this way. Recent experiments have shown that under favorable conditions unprotected electric lamps may be the cause of a fire and dust explosion. At the North Western Elevator there was an unprotected electric lamp on a drop cord hanging in each garner above the driers. A conduit line ran across the top of the garner and the lamps were suspended from this line. These lights were used by the drier-men to determine the amount of grain in the garner. Since there was undoubtedly a large amount of dust in these garner while they were being filled with grain, it is assumed that considerable dust collected on the globes and the ignition of this dust from the heat of the lamp may be considered a possible cause of the explosion. However, since tests indicate that conditions must be favorable for ignition of dust in this way, this is not considered the most likely cause of the explosion.

8. *Broken Electric Lamp Globes.*—The ignition of dust by the breaking of an electric lamp was another theory advanced in connection with the investigation of the explosion. Experiments have shown that a dust cloud can be readily ignited by the breaking of an electric lamp. It is known that the workmen engaged in cleaning the garner over the driers were using extension lights or portable lamps on long cords. These cords were attached or plugged in on the bin floor of the work house and dropped over the edges of the garner bins to furnish light for the men working in these garner. In brushing down the sides of the garner considerable dust would be thrown into suspension and the swinging of an extension light against the steel sides of the garner would be sufficient to break the globe and cause ignition of the dust. It is assumed that the men cleaning the garner allowed the dust to pass through the grating at the bottom of the garner and from there through the drier into the spout leading to the boot of the drier leg in the work house. This is the point at which the first heavy explosion apparently occurred. Evidently no heavy explosion occurred in the drier garner since they are still intact and show very little evidence of fire. It may have been possible, however, to have the primary ignition of dust due to the breaking of an electric lamp in the garner or in the drier beneath, and have the flames from this original fire propagate through the spout to the point at which the explosion is supposed to have occurred. This may be considered a probable cause of the explosion.

9. *Fire in the Drier.*—Fire originating in the drier was suggested as a possible cause of the explosion. The drier had been in operation until about 4:30 p.m., one and one-half hours before the explosion occurred. During the hearings held in connection with the investigation of this explosion it was learned that there had been a fire in the drier the Saturday previous to the explosion, which was supposed to have been due to the ignition of dust which had settled on the steam coil. This fire was first discovered about 5 o'clock in the morning and was thought to have been extinguished at that time. However, it broke out again at 3 o'clock in the afternoon and it was necessary to run a hose line into the building to extinguish it. According to further testimony at the hearing, fires in the driers had been more or less frequent for some time previous to the explosion and it was assumed that this is one reason why this part of the plant was being given a thorough cleaning. Possibly dust which had lodged in the drier became ignited and during the cleaning was brushed or shaken from its lodging place and ignited the dust in suspension throughout the drier. The flames from this original ignition would propagate in the same manner described above through the spout leading from the drier to the boot of the drier leg in the basement of the workhouse.

STATEMENTS OF WORKMEN AND EYE WITNESSES

Since all the employees working in the elevator at the time of the explosion were killed it was impossible to obtain any statements which would assist



THE NORTHWEST CORNER OF THE PLANT AFTER THE EXPLOSION; DAMAGED OFFICE BUILDING SHOWN AT THE LEFT

ther consideration the various theories advanced, are given below:

1. *Smoking in the Elevator.*—As far as could be learned, all employees at the elevator were aware of the danger from smoking, or the use of open flames in dusty atmospheres. "No Smoking" signs were posted in the plant and as far as could be learned this rule was strictly enforced. Matches were found in the clothing of some of the men killed in the explosion, but since all of the men in the elevator at the time the explosion occurred were old employees, thoroughly familiar with the danger of dust explosions, it is considered unlikely that they would forget this danger and strike a match or smoke while engaged in cleaning the driers, an operation which necessarily threw into suspension a large amount of dust.

2. *Use of Oil Lanterns in the Elevator.*—The finding of an oil lantern in a section of the elevator, and the fact that the watchmen used lanterns in making their rounds at the plant gave rise to the theory that the explosion may have been due to this cause. However, this was considered improbable since the lantern was not found in the section of the plant where the explosion is supposed to have originated.

3. *Bomb Placed in the Elevator.*—The evidence indicated clearly that the plant was wrecked by a dust explosion. No evidence of a bomb explosion or any reason for placing a bomb could be discov-

stored in bulk will heat and ignite, or smoulder. The conditions necessary for such ignition are so exact that cases of this kind are rare. This theory may be considered a possible but very improbable cause.

6. *Fire in One of the Cleaning Machines.*—During an inspection of the elevator in connection with the investigation following the explosion, one of the cleaning machines was found to have been damaged by fire. The frame of this machine was constructed of wood covered with metal. The 4x4 timbers forming the frame were charred and in some places resembled charcoal. Some of the investigators advanced the theory that this wood had been burning for some time within the sheet metal covering without being noticed by the elevator employees. It was assumed that this fire broke out late Saturday afternoon, and ignited the dust stirred up during the cleaning of the drier. Considering the possibility that this machine was damaged by the fire in connection with the explosion, it seems best to eliminate it as a probable cause of the explosion.

7. *Ignition of Dust on Electric Lamps.*—The ignition of dust which had settled on the globes of electric lamps in the elevator was another theory advanced. A number of cases have been reported by elevator superintendents in which dust which had settled on electric lamps became heated to the point of incandescence and fell from the globe into

in determining the cause of the explosion and the point at which it originated.

The watchman, who was seriously injured in the explosion, left the elevator a few minutes before the blast occurred and went to the office where he was preparing to eat lunch. He had been working for the Armour Grain Company for a year and nine months and stated that he came on duty at 4:00 p.m. the day of the explosion and pulled the first box at 5:15. He made his regular rounds, visiting the drier at 5:35 p.m., and returned to the office at 5:50 p.m. While in the drier, the point at which the explosion evidently originated, he did not see the workmen engaged in cleaning this section of the plant as at that time they were in the garner's above the driers. He did not smell smoke or notice anything unusual during his trip around the plant. He stated, however, that there had been fires in the drier some time previous to the explosion.

Employees at the power house at the time of the explosion miraculously escaped with slight injuries. They felt the shock and noticed a hissing sound but did not hear any sharp report in connection with the explosion.

The North Western Railroad Company's resident engineer at the plant was living in a car on the tracks about 1,200 feet from the plant. He stated that he was in the car when he heard the first ex-

considerable distance from the plant and the workmen who escaped from the vicinity of the elevator were unable to give any information, it has been necessary to determine the cause of the explosion and the point of origin from the evidence obtained during the inspection of the ruins at the plant and the statements concerning the condition of the elevator previous to the explosion.

CONCLUSION AS TO CAUSE OF THE EXPLOSION

Due to the fact that all the employees in the elevator at the time of the explosion were killed, it is impossible to determine definitely the cause of the explosion. However, after a thorough investigation of the wrecked elevator and consideration of the statements made by grain company officials, elevator employees, eye witnesses and workmen employed at the elevator, or stationed nearby, it is believed that the explosion was caused by fire in one of the driers. The cleaning of the garner's above the driers created the dust cloud through which the flame propagated to the basement of the work house where the first heavy explosion occurred.

The breaking of an electric lamp used by the workmen cleaning the garner's and driers appears to be a very probable cause of the explosion and should be given consideration. However, since

Grain Company officials and employees, painters who had been employed at the elevator, other workmen employed near the elevator, and eye witnesses of the disaster were questioned concerning the condition of the elevator or any information they might have which would assist in establishing the cause of the explosion.

LESSONS FROM THIS EXPLOSION

A number of lessons can be learned from a thorough investigation of this explosion. Many of the previous recommendations made by the Bureau of Chemistry for the prevention of dust explosions have been borne out in this case. The fact that "fireproof mills and elevators" are not explosion proof has again been clearly demonstrated. The fact that the storage section of the elevator and river house, where the storage bins were not covered, was heavily damaged while the work house in which the bins were floored over was damaged less than any other section of the elevator proper, would indicate that as previously suggested, all bins should be floored over, and a vent to the outside air provided for each bin. There should be no communication whatever between bins.

The greatest violence and damage was at the extreme point from where the explosion originated. This indicated very definitely the presence of sufficient dust to propagate the flame from the pri-



WRECKAGE OF THE TRACK SHED AND FREIGHT CARS ON THE WEST SIDE OF THE PLANT AS IT APPEARED THE NEXT MORNING



A CLOSE VIEW OF THE SOUTHEAST CORNER OF THE STORAGE SECTION WHERE A NUMBER OF BINS WERE BLOWN AWAY BY THE EXPLOSION

plosion and had time to get outside before the second explosion occurred.

A railroad tower man stationed about one-half mile southwest of the elevator first noticed a flash of light in his tower and when he looked out of the window saw a cloud of fire above the elevator tanks between the cupola of the work house and the cupola of the river house. A few seconds later he heard the report and saw smoke around the plant.

A carpenter who was at 138th Street, or about three-fourths of a mile from the elevator stated that he noticed flames coming from the window on the west side of work house cupola before the explosion.

The watchman for the General Chemical Company also claimed to have seen flames in the elevator before the explosion. Considering the distance from the elevator and the difference in rate of travel for light and sound it would be natural for any one at this distance to notice the flash or the flames in the elevator before they heard the report of the explosion. For this reason it is believed that the flames which they noticed were the flames of the first explosion propagating through the dust in the plant following the original ignition. The report of the first explosion may not have been loud enough for them to hear and since some time elapsed between the original dust ignition and the final heavy explosion it would appear to these men that the explosion did not occur until the flames had gained considerable headway.

Since all eye witnesses of the explosion were a

there were no signs of an explosion in the garner's, while the drier was completely destroyed, it is felt that the ignition of dust due to a fire in the drier is by far the most probable cause of the explosion. The fact that the drier was so completely destroyed would indicate that possibly there was an explosion with some violence in the drier before the flames propagated to the basement. The fact that the track shed and basement walls were forced out and the wreckage of the drier dropped to a point almost below its original position would indicate that if there was an explosion in the drier previous to the explosion in the basement it was not sufficiently violent to blow the drier from its original position.

OTHER INVESTIGATIONS OF THIS EXPLOSION

In addition to the investigation by the Bureau of Chemistry, of the United States Department of Agriculture, the results of which are given in this report, the following agencies conducted investigations or had representatives present in connection with other investigations: State Fire Marshal of Illinois, Underwriters Grain Association, National Board of Underwriters, Chicago Board of Underwriters, Western Adjustment and Inspection Company, John S. Metcalf Company, Witherspoon-Englar Company.

State Fire Marshal John G. Gambler assigned Deputy State Fire Marshals George McNally and George Byrnes to the investigation of this explosion. Hearings were conducted at which Armour

many explosion, thereby developing excessive pressure resulting in a secondary explosion of large proportions. The Bureau of Mines as a result of the investigation of a large number of disastrous coal mine explosions and special tests in the experimental mine and galleries near Pittsburgh, Pa., report that in a dust explosion the greatest destruction and violence is evident at points considerable distances from where the explosion started. This was well demonstrated in this particular explosion.

No vapor-proof globes were used on the electric lamps in the elevator with the exception of the signal lights, and a number of the lights were unguarded. Due to the fact that it has been clearly demonstrated that explosions and fires can be started by the breaking of an electric lamp in a dusty atmosphere or by the ignition of dust which has settled on the globes, elevator companies should follow out the previously made recommendation that all electric lamps be protected by vapor-proof globes and properly guarded.

The explosion at the North Western Elevator demonstrated the value of light wall construction. The cupola walls constructed of gunite or concrete sprayed onto metal lath or wire mesh were readily blown off by the explosion and little damage was done to the equipment in the cupola of the work house. The walls on the cupola of the river house were constructed of the same material but the great damage in this section of the plant was

probably due to the explosions in the open bins below and to the explosion in the storage section which threw debris against the river house. The tremendous violence evidenced in the basement of the storage section of the elevator bears out the recommendation made by the Bureau in connection with the investigation of an explosion in the Southwest—that grain elevators be constructed without a basement and with light walls or curtain doors to prevent the building up of excessive pressure underneath the bins in case an explosion occurs.*

The use of extension lights or portable lamps on long rods has long been considered a hazard in dusty industries because of the many possibilities of forming sparks due to short circuits when the connections are made by dragging the cord along the concrete floor or over the sharp edges of bins and girders. The elimination of the need for extension lights by the development of a special system of lighting for mills and elevators is a problem which is now being given consideration by the elevator lamp companies; while the use of extension lights may not have been the direct cause of the explosion, it is considered a very likely one, and of sufficient importance to demand immediate consideration.

This explosion again shows the need for a revision of the rules governing the application of suction to grain streams. Suction should be provided to collect the dust at every point where the grain is thrown or handled. Present rules prohibit the application of suction in any form to the grain before it is weighed. These rules make it necessary for the elevator operator to receive into his house all dust and dirt shipped with the grain. These regulations were designed to protect the shipper by preventing the removal of dust, or possibly a quantity of grain which would reduce the weight of his shipment and consequently the amount received from the sale of his product.

Some provision must be made which will permit the elevator operator to remove the large quantity of dust which he receives with the grain and which constitutes the menace to life and property, and at the same time protect the shipper by preventing the application of suction strong enough to remove any grain. Some provision should also be made to reimburse the shipper for the dust removed which has a certain value for cattle feed.

The damage caused in the basement of the storage section of this explosion teaches another lesson of special interest to elevator construction companies or elevator engineers. Evidently the height of the basement, especially the part above ground, was insufficient to permit the release of pressure produced under the storage bins by the explosion. In other words the pressure under the bins was built up faster than it could be relieved through the openings at the side of the house.

RECOMMENDATIONS

The investigation of this explosion shows that many of the recommendations previously made by this Bureau in its dust explosion prevention work have been substantiated.

Thin walls on heavy frame work have been previously recommended for elevator construction. The fact that in the explosion at the North Western Elevator the thin walls of the work house cupola were blown off without doing as much damage to the equipment as in other sections where heavier walls were used would indicate that the light thin wall is preferable wherever it is possible to use this type of construction.

For some time this Bureau has been recommending aspiration or the application of suction during the handling of grain in order to remove the dust before it has had an opportunity to escape and accumulate in the elevator. Rules and regulations now enforced by certain bodies prohibit the application of suction before the grain is weighed. This makes it necessary to receive the grain and dust into the house, elevate and weigh it before any aspiration is permitted. During this handling of the grain a large amount of the dust escapes,

and in a plant the size of the North Western Elevator where enormous quantities of grain are handled in a short time this dust accumulates so fast that it is almost impossible to keep the elevator clean by ordinary methods of brushing and sweeping.

Another recommendation made by this Bureau has been that all storage bins be covered, vented to the outside of the building, and have no direct communication between each other. The fact that in the North Western Elevator explosion the work house in which the storage bins were covered was damaged less than any other section of the plant, while a number of the bins in the storage section which were not covered were completely destroyed, would indicate that this recommendation should again be brought to the attention of the elevator construction engineers.

Vents should be provided on all elevator heads to permit the release of any pressure built up within the lofters legs, should an explosion occur. In many cases the explosion propagates from floor to floor through these openings. In one case where considerable trouble was experienced with explosions during the elevating process it has been necessary to vent the leg at each floor. It has been previously recommended that all ledges or surfaces where dust may accumulate in the building be enclosed or bevelled at such an angle that it will be impossible for dust to accumulate on them. The fact that the framework over the storage bins was of structural steel with many exposed places where dust might lodge, permitted large accumulations at this point which it was impossible to remove without employing a large force of sweepers.

Previous recommendations have been made for the protection of all electric lamps in dusty atmospheres by the use of vapor-proof globes and heavy guards. The fact that one of the signal lights in the track shed, the only lights protected by vapor-proof globes at the North Western Elevator, was blown out with the frame work of the track shed and still remains unbroken, indicates the degree of protection afforded by this type of equipment. Other lamps were used throughout the plant without even the protection of a light wire guard. Since tests have shown that explosions can be started by the breaking of an electric lamp in a dusty atmosphere, or the ignition of dust which has settled on the lamp globe, steps should be taken to see that all equipment of this kind in dusty industries is sufficiently protected.*

It has been previously recommended that instead of one large dust collecting system several separate installations be used for the removal of dust from large plants of this kind. At the North Western Elevator a large dust settling chamber with cyclones was installed between the work house and the storage section. The complete destruction of this equipment would indicate that in future installations the settling chambers and collectors should be located some distance from the main plant or at least on one side and not between buildings. Good housekeeping is essential for the prevention of disastrous dust explosions. Too much emphasis cannot be placed on the necessity for removing all dust from the house as soon as possible.

*U. S. Department of Agriculture, Circular No. 71.

WELL KNOWN ILLINOIS DEALER DIES

Illinois Grain Dealers lost a real friend on August 21, in the death of Samuel S. Neiman of Warrensburg, Ill., at the age of 56 years, and after a year of failing health. At the time of his death he was planning to retire and had turned over the management of his Warrensburg elevator to his nephew, Kirby R. Stahl, who will now manage the Bearsdale house also.

Mr. Neiman was born near Warrensburg and spent his entire life in Macon County. After graduating from Valparaiso University he entered the grain business with his uncle, William Ritchie, with whom he had made his home since he was

12 years old. He became head of the Warrensburg and Bearsdale elevators and made many friends by his square dealing and generosity. His loss is keenly felt in the community, and the grain trade of the state will carry a tribute of sorrow and will join us in our sympathy toward the sister, two brothers, and a half-sister who survive.

NEW ELEVATOR FOR IOWA FARMERS

All ready for the new crop, and splendidly built and equipped is the new 40,000-bushel elevator, erected by the Newell Construction & Machinery Company for the Farmers Elevator Company of Calamus, Iowa. Calamus is some 30 odd miles west of Clinton and is in a territory of large crops, which contribute to the grand total which makes Iowa the banner farming state of the country.

The elevator company recently increased its capital stock from \$25,000 to \$50,000 which, with the splendid facilities for handling grain, puts it in a favorable position to turn over a safe balance of profits for its stockholders.

The new elevator was built under difficulties, but the construction company turned it over to the



PLANT OF FARMERS ELEVATOR COMPANY, CALAMUS, IOWA

owners in contract time. The house is of concrete construction, with 10 circular bins 75 feet in height and with a cupola 26 feet above the bins or 102 feet above grade level.

The equipment consists of a steel leg, drawn by a 10-horsepower motor; a B. S. Constant No. 35½ Twin Shoe Receiving Separator, driven by a 7½-horsepower motor; a 2,000-bushel Fairbanks Automatic Scale; a 10-ton Howe Dump Scale; a Newell motor power driven combination Auto Truck and Wagon Dump; and a B. S. Constant Manlift, operating from the work floor of the cupola.

The Farmers Elevator Company has reason to be proud of its new house and the directors have expressed themselves as being well pleased with prospects for the new season.

WHEAT YIELD IN NORTHERN HEMISPHERE

Forecasts of the wheat yield in the Northern Hemisphere issued last month by the International Institute of Agriculture at Rome, show that it will be approximately 50,200,000 tons, compared to 51,300,000 in 1920. The crop in Europe, leaving out of consideration Great Britain, France and Germany, is estimated at 12,000,000 tons, compared to 10,500,000 last year. Canada and the United States are expected to produce 28,500,000 tons against 28,600,000 tons in 1920, and India, Japan, Algeria, Morocco and Tunis will, it is said, yield 9,400,000 tons against 12,000,000 harvested last year.

*Proceedings Grain Dust Explosion Prevention Conference, July, 1920.

COMMUNICATED

A CHANGE IN LOCATION

Editor American Grain Trade:—We have moved the Hobart office of our company to Suite 418 First National Bank Building, Chickasha, Oklahoma, and we are going to ask you to send our AMERICAN ELEVATOR AND GRAIN TRADE to the above address, and oblige. Yours very truly, J. T. GIBBONS GRAIN COMPANY, Chickasha, Okla.

A CHANGE IN LOCATION

Editor American Grain Trade:—Please note that we have moved our offices from Chicago to Cedar Rapids, Iowa, and the AMERICAN ELEVATOR AND GRAIN TRADE that you have been sending to the writer at 36 South State Street should in the future be sent to him care Penick & Ford, Cedar Rapids, Iowa.

Yours truly, PENICK & FORD, Ltd., Inc.,
E. H. Bingham, Mgr. Grain Dept.

THE BULKHEAD CHARGE

Editor American Grain Trade:—A misleading item appeared in one of the weekly grain journals early this month in regard to bulkhead charges on cars in Western Trunk Line territory. Lest the garbled facts be given too much credence, I give you herewith the exact situation.

For several years there has been effective in Western Trunk Line territory a rule which provided charge of \$5 a car for privilege of installing bulkheads or partitions in mixed carloads of grain. Effective May 15, this rule was extended into other territories. What I am trying to do is to get the carriers to cancel the charge. With this object in view, I have been in correspondence with the chairmen of several traffic committees and I am advised that a joint hearing will be granted about the latter part of this month or early in October. The hearing will be participated in by representatives of the Western Trunk Line Committee, the Central Freight Association and the Illinois Freight Association. It is desirable that shippers who are interested in this proposition should attend the Chicago meeting and present arguments in favor of canceling this privilege charge.

Yours truly, W. K. VANDIVER,
Transportation Commission, Grain Dealers National Association.

NEWS FROM NORTHERN OHIO

Editor American Grain Trade:—The recent advance in wheat, corn and oats does not seem to have stimulated the movement from farms in northern Ohio to any marked extent. Farmers, however, have been busy getting their ground ready for wheat, and will be sowing it next week. So far, none has been put in the ground.

Much of the corn has been cut during the past week. South of Tiffin, between Nevada and Marion, considerable of the corn is stunted and dried up. West and north of Tiffin, the rainfall was greater at the proper time, and the corn fields are very much better—in fact, some of them are being cut almost too green. Many of the ears have not filled out properly toward the ends, and this will necessitate considerable sorting if corn is to be sold.

Many of the elevator men are complaining of the presence of the little red weevil in wheat, which will warm up quickly if allowed to stand for any length of time. If the wheat is watched closely, it can be milled and these weevil easily blown out as soon as discovered.

There will be some Red Clover in this territory, but no large crop. To the south it has been too dry, and very few fields are to be found. To the east there are many promising fields. In every case, it is purely a matter of the amount of growth on the ground, as every head is loaded with seed—and it is of good quality.

A. A. Cunningham, president of The Sneath-

Cunningham Company, Tiffin, Ohio, and prominently connected with many of the city's largest industries, started on Sunday, September 11, on an automobile pilgrimage to Boston, Mass., to attend the Supreme Council, Thirty-third Degree Masons. Mr. Cunningham is accompanied by John P. McCune, T. B. Guitteau, A. O. Thomas, and W. E. Joseph. The trip to Boston is being made by way of Buffalo, Utica, Manchester, Vt., Bretton Woods, and Portsmouth, N. H. Returning the party will visit Providence, R. I., New York City, Atlantic City, Baltimore and Washington.

R. D. Sneath, president of The Commercial National Bank and vice-president of The Sneath-Cunningham Company, Tiffin, Ohio, has accepted an appointment which makes him a member of the local committee of the War Finance Corporation. In this capacity, he will be empowered to pass upon advances made to banks which have extended loans to farmers under the Federal loan scheme. The War Finance Corporation will conduct an agency here, it was learned through the telegram which notified Mr. Sneath of his appointment.

At the conclusion of an inspection of Lake Erie shore corn fields, L. H. Worthley, Federal Entomologist, issued a call for a meeting of entomologists at Sandusky, Ohio, September 15 to discuss means of combating the European corn borer. This pest is coming into the United States from Canada, according to Mr. Worthley, and the number of arrivals is alarming. Experts from all over the United States and Canada are asked to the conference.

Appearances point to a good acreage of wheat being put out in the vicinity of Tiffin, Ohio. The weather has been ideal for getting the ground in shape, and the farmers, generally, have taken advantage of it. The long, hot spell has burned the ground out thoroughly, so that it easily crumbles under the improved implements now in use. Where the ground has been gone over with a cultipacker, it is as even and free from lumps as a lawn-tennis court. Wheat sowing should be well under way by September 10.

To the north, east and west of here, there appears to be an excellent corn crop, as viewed from the roadside; but close inspection shows that many of the ears are not filled out to the ends. About 20 per cent of them show a blight of some sort, which has prevented them filling for more than two-thirds of their length. Cutting is now on in earnest.

Henry D. Miller, former manager of The Bucyrus Mill & Elevator Company, Bucyrus, Ohio, has just returned from a three-weeks' fishing trip in Michigan. Owing to his wife's ill-health, Mr. Miller has disposed of his interests in Bucyrus, and will shortly move with his family to Florida.

Ed. McLaughlin has just resigned as manager of The Nevada Farmers Elevator Company, Nevada, Ohio. His successor has not been appointed at this time. It has been rumored that the plants, comprising the elevator and mill, are for sale.

No successor has been appointed to fill the vacancy caused by the resignation of S. A. Crilley, former manager of The Farmers' Co-operative Company, Forest, Ohio.

Farmers' elevators all seem to be having a "hard row of stumps" just now. Most of them had big losses the past year, and now they find themselves up against a serious problem in the "money question." Many of them are quoting prices away below the market, as they cannot get money to pay for grain. Farmers, who formerly were anxious to be put on the "Board of Directors" and to endorse notes for borrowed money, are now side-stepping the job and trying to shift it to other shoulders. They are beginning to realize that they are each individually responsible for the full amount of the notes that they jointly endorsed. One farmers' elevator near here (Havens, Ohio) recently

"gave up the ghost" and sold out to an individual. Some day, the directors of this house will be pointed to as far-sighted men who were able to sense the impending disaster, and got out with only a minimum of loss.

The Equity Company at Bucyrus is in litigation with Henry Oberlander, former manager. The latter has sued for payments alleged to be due him through sale of his elevator to the company.

Yours truly, T. J. CUNNINGHAM,
Tiffin, Ohio.

COMPARATIVE COST OF HANDLING
GRAIN IN SACKS AND IN BULK
IN PACIFIC NORTHWEST

Investigations as to the comparative cost of unloading bulk and sacked grain from railroad cars at a modern terminal elevator located at Portland, Ore., conducted by the Grain Division of the Bureau of Markets and Crop Estimates, United States Department of Agriculture, show that it costs over four times as much to unload a car of sacked grain as it does to unload a car of bulk grain. The costs are figured on the basis of labor charges at 80 cents per hour and power charges at 1½ cents per horsepower per hour. Power was used in spotting the cars at the elevator and in working the power shovels when unloading bulk grain.

The distribution of the average time required to unload the cars and the average costs is shown in the following table:

	BULK*		SACK**	
	Minutes	Cost	Minutes	Cost
Spotting car	3.4	\$0.153	1.5	\$0.078
Breaking out	11.0	.245	2.5	.10
Handling grain	21.0	.602	116.4	4.65
Cleaning out car....	10.2	.452	26.0	1.04
Totals	45.6	\$1.45	146.4	\$5.87

*Average tonnage per car, 40.8.

**Average tonnage per car, 40.1.

These figures include the time required and the cost of unloading the cars only and do not include the time or cost required for elevating or weighing the grain in the elevator.

MORSE EMPLOYEES HAVE ANNUAL
FIELD DAY

The 800 employees and families of Morse Industries, Ithaca, N. Y., held their Annual Field Day, Saturday, July 30, under the auspices of the Athletic Association. The morning was given over to baseball on the Percy Field of Cornell University, the first game being between "Comedy Nine" and "Tragedy Nine" of the women's clubs. The nine-inning game was snappy, the points being played and worked out like professionals, the "Comedy Nine" defeating "Tragedy Nine" 13-8. Following the women's game the Morse Industries City League team played the Morse Independents.

In the afternoon a program of 14 field events was played at Cascadilla Field. A remarkable feature of the day was the promptness with which the Field Marshals staged their events, having their entries in line awaiting the crack of the pistol before the preceding events were finished, the women marshals vying with the men on alternate events and winning the prize for prompt and effective work. The 10 water events which followed included exhibitions that closely approached professional work, and following them came the picnic supper furnished by the company.

At the conclusion of the second dance in the evening President Frank L. Morse of the Morse Chain Company distributed the prizes furnished by the Athletic Association and awarded to Morse Industries employees only, for the first three places in all events. As they adjourned all were unanimously proclaiming "the end of a perfect day" and what fun, what better acquaintance and understanding the Field Day had given to all.

AUGUST exports from this country were \$181,000,000 in excess of imports, which brings the total excess of the eight months of 1921 to \$1,480,574,660. This is not encouraging for the payment of Europe's debt.

Annual Meeting of the National Hay Association

THE twenty-eighth annual convention of the National Hay Association, held at the Hotel Sherman, Chicago, on August 23 and 24, ranked high in interest and importance although the attendance was rather disappointing as a less number registered than were required to get the railroad fare rebate. The settlement of the grades question was an outstanding feature of the convention and most dealers will welcome the elimination of "choice" and "standard" Timothy. Another feature was the promptness with which the various sessions were held, President White making a concession to sociability at only one session.

ADDRESS OF WELCOME

The program was opened by President R. M. White of Duluth, who introduced Rev. H. J. Buckingham, pastor of Christ Church, Chicago, for the invocation, after the assemblage had sung "America," all standing.

The address of welcome was given by Jos. P. Griffin, president of the Chicago Board of Trade, who was most cordial in his greeting, and emphasized the close affiliation and community of interests between the hay and grain trades. Speaking of the trials the grain trade has passed through, Mr. Griffin said:

If all business institutions had been subjected to the same bitter attack as the grain exchanges the American industrial structure would have collapsed.

The grain trade has been in the heat of a dramatic struggle for existence, the struggle began a year ago with world price deflation. There was no more reason for attacking the exchanges than the banking industry or the railroads or any other line of business.

But the grain trade is an easy target. If prices go down the producer is naturally disappointed. It is then that the agitator reaps a golden harvest by turning the farmer's disappointment into bitterness against established methods of marketing. The agitator makes extravagant promises. Frequently he thus obtains a seat in legislature or congress. Sometimes he becomes an officer of a new cure-all for agricultural problems at a substantial personal income.

No one unfamiliar with the grain trade can realize the unnecessary hardships and business disturbances to which it has been subjected. The wave of emotion engineered by uninformed, ambitious critics carried with it a number of proposed laws as destructive as anything ever offered in a law-making body. Fortunately, when the state and Federal lawmakers and farmers themselves realized the grave dangers of such impractical legislation it was defeated. But this was only after protracted and expensive inquiries and statements by leading economists that the present grain marketing system is the most economical food distributing machinery in the world.

Recently Congress agreed upon the so-called Capper-Tincher Bill. While it does not by far represent the wishes of the grain trade it is less dangerous than measures previously offered. Its effect remains to be seen. Secretary Wallace has pledged himself to administer the law in a reasonable, constructive manner.

Is the fight on the grain trade the prelude to similar unjustified, disturbing attacks against other lines of commerce? Is the proposed grain pool, which would tie up billions of dollars worth of the farmers' produce for five years, with no security but the high-sounding promises of grain pooling directors, to be followed by other such movements?

It is reasonable to presume that a few of these quixotic movements would kill individual business initiative—the thing that has built up the wealth and power of the nation. The entire industrial structure would be shaken. The dangers are deep-rooted.

American business is thus turning the corner after a long period of depression. The dark clouds have been cleared from the industrial horizon. Sound judgment, co-operation of the right kind, less government in business, and a curb on agitators who are spreading false doctrines against established business institutions will hasten the era of prosperity.

Mr. Griffin closed by inviting all members of the Hay Association to the Board of Trade, their badge being the only necessary credential.

The response to the welcome was given in an able manner by Warren H. Dean of Auburn, N. Y. He was followed by F. D. Butz of Kendallville, Ind., who gave the memorial address, in which he paid tribute to all members who had died during the year, with special reference to H. G. Carter who was killed shortly after his election to the presidency. Mr. Butz also acknowledged the debt

of the Association to Mr. White, who so ably filled Mr. Carter's place at considerable sacrifice to himself.

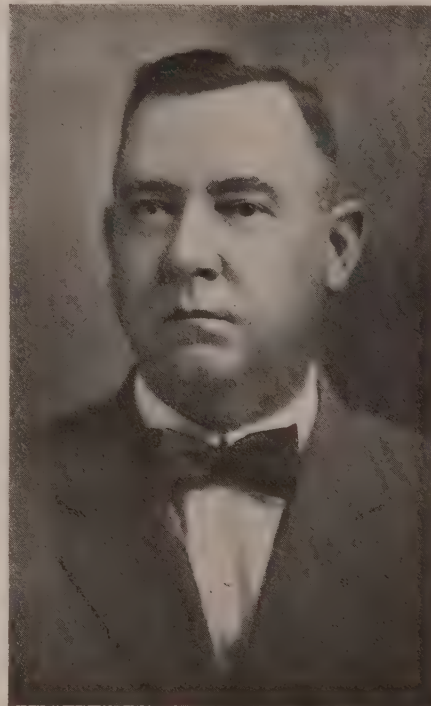
REPORT OF BOARD OF DIRECTORS

Vice-president F. A. Coles took the chair while President White read the Report of the Board of Directors, as follows:

During the past year I have endeavored to foster among our members a spirit of co-operation that would more closely cement our business relations, promote a wider personal acquaintance, and encourage a higher ideal of social and commercial development.

At the time of my appointment to serve as president of this Association the members were greatly shocked and grieved at the untimely death of our president, Mr. H. G. Carter of Richmond, Va., who shortly before had been elected to serve the Association during the past year.

At the beginning of my term of office, as it has been at all times since, it was my desire to carry out the work of the Association for the year as nearly as possible, as planned by President Carter. There were no changes in the arrangements of committees; and I can only hope that the final results of our



PRESIDENT R. M. WHITE

year's activities will approximate those we would confidently have expected to achieve under the leadership of our departed president.

A few months later we were again grieved by the death of our ex-president and director, Samuel Walton of Pittsburgh, Pa. Words cannot express the feeling of regret at the loss of this dear friend and counselor, who had accomplished so much good for the Association. Mr. H. G. Morgan of Pittsburgh, Pa., was elected by the Board of Directors to fill Mr. Walton's unexpired term on the Board.

During the past 12 months we have been passing through a period of "hard sledding." It is generally spoken of as readjustment, but in my judgment "hard sledding" better emphasizes the business condition during the time of my serving the Association as your president. The phrase "period of readjustment" is an abstraction which may mean almost anything or nothing. It requires explanation to convey a concrete meaning. I am sure the personal experience of my hearers will render any explanation of what the other term means wholly unnecessary.

The merchandising of the 1920 crop of hay was characterized by a year of bad bargains. Prices continued to find a lower level as we advanced through the year, and at the beginning of this year's harvest the Government report shows that about one-third of the 1920 crop of hay then remained on the farms and in the terminal market warehouses.

One of the most important factors contributing to this condition was the high freight rates that were put into effect on August 26, 1920. On many shipments of hay the freight charges are equal to, or in excess of, the value of the hay at the point of shipment. Instead of the increased freight rates advancing the price of hay it resulted in causing the hay business to become localized by prohibiting long distance movements as the value of the commodity

would not stand the high transportation charges imposed upon them. There were also many other causes which helped in bringing about a business depression and discouragement, such as the hay merchant had never experienced.

There is nothing peculiar about a business depression. It follows a period of prosperity, just as night follows day. The way out of this business depression is not through further restrictive legislation. The various "cure-alls" which Congress and the Bureau of Markets are suggesting will only further complicate a bad situation. The best that Government can do is to protect liberty, and assure each man the right to sell his products in the highest markets, and assure each one that these markets are acting freely—controlled by neither buyers or sellers. Government cannot be the creator of business welfare, but merely the guardian of it. Let every individual do all he can to help and encourage his liberty. Let every member of the National Hay Association determine to be honest; stand by his contracts; and try to render the greatest service possible at a reasonable margin of profit, and in this way our readjustment period can be greatly shortened. Without undue optimism, however, I believe we are justified in the belief that we have experienced during the year just passed the worst of the period of uncertainty and depression which of necessity must be expected to follow world conditions wholly unparalleled in history and that the restoration of normal conditions in financial and commercial circles will be reflected in our markets within the very near future.

Memberships

During no year since the organization of the National Hay Association have we lost so many members on account of their going out of business. There has also been an unusual number of resignations on account of firms cutting down expenses until business improves. I feel proud to report to you that our membership list includes a very large percentage of the substantial and prominent hay merchandising firms throughout the United States and eastern Canada. We have had a splendid increase in new members and at this time I wish to express my appreciation for the splendid work of 87 of our members who have made it possible to report an increase of 181 new members since our last convention. To those who have not contributed their services to the work of membership-getting allow me to earnestly appeal to you to pledge yourselves that you will do your part this coming year, to increase our membership roll to a point above the 2,000 mark. Co-operation will do it. You and your business will profit in proportion as you give your support to an organization whose only object is to improve the marketing and handling of a commodity that is most vital to your success.

Association Affairs

In accordance with the recommendations at our last convention in Cincinnati the Board of Directors instructed Secretary Taylor to engage Morton Longnecker to represent the National Hay Association in the capacity of Traveling Inspector. This was done, and Mr. Longnecker has served the Association well. He has traveled through the Middle West, the Eastern and Southern States. It was recently decided that the Association funds would not warrant continual travel and during the last few weeks Mr. Longnecker has devoted his time in assisting Secretary Taylor in Winchester.

It has developed during the year that some of our terminal markets are not inclined to adopt National Hay Association grades or to have their inspectors approved by the National Hay Association. The principal objection was on account of the grade rules. With the hope of overcoming this objection our Grades Committee has given the grade rules careful study during the year. A special meeting of the Grades Committee, inspectors, and others interested in grades was held in Chicago on August 3. Twenty-four members were present—representing 10 states. Each grade rule was carefully considered and when completed it was unanimously voted that the Grades Committee present the revised grade rules to this convention and recommend their adoption, and it is hoped that every terminal market will gladly approve of and adopt the National Hay Association grades as adopted by this convention, and also make application to the secretary for their inspectors to be approved of by the National Hay Association. Co-operation is the fundamental rule of social and commercial development, and I earnestly hope that every terminal market may realize the importance of united action on this subject of grades and approved inspectors. We must become united and govern our business affairs, or the Department of Agriculture through its Bureau of Markets will force their ideas or theories upon us, through Government inspection and supervision.

I would recommend that our Constitution and By-Laws be amended as follows:

Any individual firm or corporation who is admitted to membership in this Association shall arbitrate any legal difference with any member, although said dif-

ference may have originated prior to the time he was elected to membership in the Association. Any member of this Association shall be required to arbitrate any difference with any person who may be admitted in this Association, whether such difference originated prior to the time said new member was admitted to membership.

Also cancel in Section I, Article II, and substitute the following:

If annual dues and other moneys owing the Association are not paid within thirty days after proper notification by the secretary a demand draft with exchange shall be made against them, and if same is not paid then said member shall stand suspended and be so notified by the secretary. They shall not be entitled to vote or be heard on any question at any meeting or be allowed to resign until such dues or charges are paid. It is understood that the fiscal year begins July 1.

I further recommend that the incoming president and Board of Directors carefully consider the subject of empowering all approved hay inspectors or other competent persons to settle controversies over grades among our members, and that these men shall at all times be subject to the call of the Association under the direction of the secretary's office. This plan would greatly reduce the expenses connected with the settling of all disputes over grades and make it possible to give quick service in the settlement of differences over care of hay on tracks or while being unloaded—the inspectors to be paid for their services on the same basis as the rules now in effect. In my opinion this would give a quick and special service of the greatest practical importance, rendered at a reasonable expense to the interested parties.

I recommend that the National Hay Association give their united support of the Horse Association of America which is carrying on a campaign of education that is of the utmost importance to members of this Association, and we should do our part in fostering its activities by our individual support, both financially and otherwise.

There will be introduced at this convention a revised set of trade rules for your consideration and I recommend their special consideration and approval.

Our publication, the *National Hay Press*, has become a permanent fixture in the operation of the publicity department of our Association. It has proved itself to be a valuable advertising medium for our members, as well as giving to the members all of the important activities and developments of Association work each month. Great credit is due the editorial staff for the many interesting and instructive articles to be found in its columns.

During the year your directors have held four meetings. The first meeting was held in Cincinnati directly after the close of the convention. The three other meetings were held in Chicago. With the exception of the meeting held yesterday, you have been informed of the work performed through the columns of the monthly publication.

In accordance with the action taken at our last convention, the time for holding our annual convention has been reduced to two days. On account of this being our first experience in holding a two days' session, I recommend that careful thought be given this subject, and if the plan is not satisfactory that a full discussion of the subject be had before the close of this convention.

Transportation problems have occupied a great amount of time and necessitated much travel in attending rate hearings before the Interstate Commerce Commission and before railway officials in different sections of the country. Great credit is due our traffic manager, D. J. Sims of Auburn, N. Y., for the splendid service rendered the Association in this department of its activities. During the convention Mr. Sims will inform you of the year's activities in, and achievements of, the traffic department.

I must not close without expressing our obligation to, and appreciation of, the trade journals which have repeatedly given the National Hay Association affairs liberal recognition through their columns, and I suggest we should give to them our active support, through subscription and advertising.

I wish to thank all of the committees and their chairmen for the splendid support given the Association during the past year. Much as I would like to do so, I should refrain from mentioning names, as there have been so many loyal members and friends whenever called upon that I would not know where to stop; but I consider it proper that I should make special mention of our worthy secretary-treasurer, J. Vining Taylor. It would be impossible for me to express in words the high regard I have for this gentleman. He has constantly been mindful and watchful to relieve me of all work possible. He is energetic, capable and courteous, and ever mindful of his duty to the officers and members. He carefully watches expenditures and can properly be called the guardian of our treasury.

In conclusion allow me to urge upon every member of this grand and glorious organization the individual necessity for a unity of spirit and responsibility. Let our highest ideals guide our efforts in striving to fulfill the Golden Rule by applying it to our every day business life, and we can then measure up to the conception of our motto, "Not for Self, but for All."

President White appointed the following committees: Nominating Committee: D. W. McMillan,

W. H. Dean, J. T. J. Walton, H. A. Bascom, Rudolph Raabe, C. D. Carlisle, A. E. Nicholls. Committee on President's Report: R. D. Clark, Roy North, C. E. Walters and Messrs. Parker, Malcomson and Van Leunen, and S. L. Rice. Resolutions Committee: John Devlin, Dan Mullally, Harry



SECRETARY J. VINING TAYLOR

Northway, I. L. Sutherland, G. W. Williams. Auditing Committee: T. J. Hubbard, M. C. Bassil, E. A. Williams.

TUESDAY AFTERNOON SESSION

The Tuesday afternoon session opened with songs led by M. C. Niezer of Ft. Wayne after which George F. Brown of Charleston, W. Va., gave the



PRESIDENT-ELECT W. I. BILES

report of the state vice-presidents. These reports showed in some detail the conditions in the trade in the various states.

H. A. Wheeler, vice-president of the Union Trust Company, Chicago, gave a brilliant address on "Government in Business Insures Taxes." This was so highly appreciated that, by unanimous vote it was ordered printed in pamphlet form, and will be sent to each member of the Association. For that reason the address will not be given here.

D. J. Sims, traffic manager of the Association, gave a brief report of the traffic department for the year and then in an interesting manner out-

lined the present position of the railroads and the subject of rates. He said that the Government owes the railroads about \$500,000,000 and the railroads owe the Government approximately twice as much. Plans are being made whereby the Government will pay its indebtedness and allow the roads to fund their debt. Under the operations of the Labor Board rail wages have been increased \$600,000,000 per year, and to offset it, rates on Eastern lines have been advanced 40 per cent. The chief difficulty lies in that section of the Transportation Act which allows the Commission to fix rates that will return 5½ per cent on the roads' investment. At present the roads are earning only about 2 per cent, so there is little likelihood of a flat reduction. It remains for the hay trade to convince the carriers that a lower rate will produce more business, and this can be done only by exact figures on definite shipments in which the car number, shipping point, destination, rate, and prices realized.

In the discussion which followed Mr. Sims' address, a Dakota shipper stated that he had kept such figures on 100 cars, and that the rates were twice the value of the hay at shipping point.

W. H. Toberman of St. Louis gave the Report of Arbitration Committee No. 1, in which he took occasion to congratulate the Association on the small number of differences that arose, and the fair and friendly spirit that was manifested in their settlement.

REPORT ON STATISTICS

F. C. Palmer of Chicago read the report of the Committee on Statistics, as follows:

In preparing the annual report of the Statistics Committee, it was thought desirable to boil down from a mass of figures a few pertinent ones that will indicate in a condensed form, what statistics have to tell about the hay trade at this time.

We have assumed that it is well to look facts in the face, believing that the hay trade of the country is able to work and will work out the present problems as it has worked out problems in the past.

The chief feature of the crop year just concluded was the demoralization shown in the prices and movement of hay. It is not hard for the trade to place part of the blame, but several factors have contributed.

Your Committee points to the receipts and shipments at terminal markets and submit figures from Kansas City, Chicago, Cincinnati, St. Louis, Cleveland, Los Angeles, Milwaukee, Minneapolis, Peoria, and San Francisco, as a fair index of the American hay trade. Figures for several other markets are not included because comparative receipts were not available.

In some cases, several months are missing from both years, but the comparison in receipts as follows is accurate. The three largest markets, Kansas City, St. Louis and Chicago, are complete.

On the 10 markets for the six months ending July 1, 1921, with the exceptions above noted, receipts totalled 371,520 tons against 698,187 for the corresponding time last year, a loss of 326,667 tons or 47 per cent. In other words, the loss of an additional 22,000 tons would have resulted in just one car at these 10 markets where two were a year ago.

The loss in shipments was even greater, though figures from only seven markets were available and again some months are missing in three cases. The decrease amounted to 51 per cent, indicating that the shipping business on the 1920 crop was less than half of the previous year.

Your Committee endeavored to get the total tonnage moved for the crop year on all roads, with previous comparisons, but was unable to do so. We felt it would be significant to say the least.

Total hay tonnage originated by all railroads in 1919 amounted to about 7,500,000, approximately 7 per cent of the 1919 crop or over 8 per cent of 1918 production. Your Committee is willing to predict that the tonnage originated for the 12 months ended July 1 will not approach 7,000,000.

On the new crop the Government estimate on August 1 indicated a drop of 10,000,000 tons in tame hay and 1,500,000 in wild hay as compared with 1920 production, a total of 11,500,000 tons decrease or an indicated crop of 97,100,000 tons. This would mean a shrinkage of about 10 per cent on both classes, and a loss compared with a five year average of 4,200,000 on tame hay and 2,000,000 on wild hay, amounting in all to a crop 6,200,000 tons short of recent average years.

The U. S. Department of Agriculture announces prices on tame and wild hay, August 1 as \$12.47 and \$7.67 respectively. These figures show a loss compared with a year ago of \$9.60 and \$7.71, or in percentages 43 and 50.

The price situation is, I believe, more accurately reflected by some figures on the Kansas City market. These are for the crop year 1920 and 21 and include every car sold on that market during the entire 12

months. Prairie at \$12.31, Alfalfa \$19.31 and tame hay \$17.66, show losses of 32, 32 and 35 per cent respectively, compared with the preceding crop year. The decline amounted to about \$6 on Prairie, \$9 on Alfalfa and nearly \$10 on tame hay, on the total volume handled at that market. These figures are unusually valuable because of the wide variety of hay handled there, the wide source of supply and distribution, and the immense volume of business done. They are not guesses nor estimates.

Continuing to take facts as they are rather than as we wish they were, we find conflicting ideas regarding future consumption. There are probably 500,000 more horses and mules in the United States now than 10 years ago or about a 2 per cent increase. However, in 1910 15 per cent of the equine population was in cities, towns and villages, whereas, at present only about 3 per cent is found there. The 12 largest cities in Illinois show a decrease in the census period from 90,118 to 39,593 or 56 per cent. There has probably been a change for the better in these figures since they were gathered, as the educational campaign along this line is bearing fruit. Mr. Wayne Dinsmore will probably go into detail on this subject tomorrow.

Last summer at Cincinnati President Young said in his annual report that the future called for forward looking men in the hay business and that clear vision was necessary to meet the reconstruction. It will probably be agreed that his judgment was sound, and all the statistics this Committee has examined emphasize that thought.

D. S. Wright of Weedsport, N. Y., reported for Arbitration Committee, No. 2, emphasizing the necessity for closer attention to the trade rules.

C. R. Melcher made a brief report on hay grades and gave a tentative list of new grades.

Before adjournment for the day D. W. McMillan reported that the Nominating Committee submitted the following list of names for officers for the ensuing year: President, W. I. Biles of Saginaw, Mich.; first vice-president, F. A. Coles of Middletown, Conn.; second vice-president, A. E. Nicholls of Los Angeles, Calif. Board of Directors: R. M. White, Duluth; Rudolph Raabe, Ft. Jennings, Ohio; J. T. J. Walton, Pittsburgh; George F. Brown, Charleston, W. Va.; and W. H. Dean, Auburn, N. Y.

WEDNESDAY MORNING SESSION

The report of the Grades Committee was the first thing on the program on Wednesday morning. The Committee recommended changes in the grades as follows:

GRADES

NO. 1 TIMOTHY HAY—Shall be Timothy containing not more than one-eighth Clover or other tame grasses, bright color, sweet, sound and well baled.

NO. 2 TIMOTHY HAY—Shall include all Timothy not good enough for No. 1, fair color, not more than one-eighth Clover or one-fifth other tame grasses, may also contain 2 per cent foreign matter, sound and well baled.

NO. 3 TIMOTHY HAY—Shall include all Timothy not good enough for other grades, not over one-fifth Clover or one-third other tame grasses, including 5 per cent foreign matter, sound and reasonably well baled.

SECOND—The elimination from our rules the Grade No. 3 Clover Mixed, No. 3 Clover Hay and Choice Prairie Hay.

NO. 1 JOHNSON HAY—Shall be Johnson hay with not more than 15 per cent mixture with Clover or other native grasses, good color, sound and well baled and to show medium texture.

NO. 2 JOHNSON HAY—Shall be Johnson hay, with not more than 25 per cent mixed with Clover or other native grasses, sound, fair color and well baled.

NO. 3 JOHNSON HAY—Shall be Johnson hay, not good enough for other grades, may be coarse, brown, or may contain 10 per cent air or sun-bleached hay on outside of bale, all to be sound and well baled.

NO. 1 SALT OR ALKALI HAY—Shall be salt grass hay of bright natural color, sound, well cured and baled and may contain 2 per cent weeds.

NO. 2 SALT OR ALKALI HAY—Shall be salt grass hay of good color, well cured, sound, well baled, and may contain 5 per cent weeds.

NO. 3 SALT OR ALKALI HAY—Shall be salt grass hay of fair color, and may contain 12 per cent weeds, wild sage not included, a trace of dead grass or undergrowth, otherwise sound and well baled.

NO. 4 SALT OR ALKALI HAY—Shall be salt grass hay not good enough for other grades, may contain 50 per cent stained and may contain 10 per cent wild sage or 25 per cent weeds, but not caked.

NO GRADE PRAIRIE HAY—Shall include all prairie hay, hot, musty or in any way unsound.

BEDDING HAY—Shall include all hay badly off color, woody, but must be sound.

After a great deal of discussion in which the grade "Choice" found several supporters the grades as proposed were adopted. The question then was

asked: What is to be done with members who persist in quoting the grade "choice"? The impression prevailed that such members made themselves liable to discipline by the Association. Upon motion the adoption of the grades was made unanimous.

RAILROAD RESPONSIBILITY

William H. Finley, president of the Chicago & Northwestern Railroad, gave an address on "Railroad Responsibility." He quickly disarmed what-



EARL F. SKIDMORE AND S. O. DOWNER

ever antagonism there was and brought before the shippers some of the problems which the railroads were facing. Among these are the financial burden which began to be oppressive before the war, due largely to legislation which put expenses on the roads which had to be met from the capital account and could not be made a part of operating cost. He showed how rates should have been increased before the war, and then pointed out the enormous increase in operating costs and rates which the Railroad Administration imposed. Horizontal rate changes are unjust and it is a long process to get them adjusted.

Mr. Finley compared the service performed by the railroads with that of motor trucks and inland water carriers. He pointed out that trucks operated on public highways built by taxation while

thought that they should watch legislation which would impose unnecessary burdens on the roads which, eventually the shippers would have to pay for.

TRADE RULES

The report of the Trade Rules Committee was presented by J. W. Sales of Bluffton, Ind., and was adopted, carrying with it the revised trade rules as follows:

Rule 1—Trade. It shall be the duty of both buyer and seller to include in their original articles of trade, however conducted, the following specifications: Number of cars, tons or bales. Size of bales. Grade of hay or straw. Price. Terms of payment. Rate basing point. Time of shipment. Route.

Rule 2—Confirmation. (a) It shall be the duty of both buyer and seller, on day of trade, to mail, each to the other, a confirmation in writing (the buyer a confirmation of purchase and the seller a confirmation of sale), setting forth the specifications as agreed upon in the original articles of trade. Upon receipt of said confirmation the parties thereto shall carefully check all specifications named therein and, upon finding any differences, shall immediately notify the other party to the contract, by wire or telephone, and confirm in writing, except in the case of manifest errors and differences of minor character, in which event notices by return mail will suffice.

(b) When a trade is made through a broker, it shall be the duty of the broker, on the day of trade, to send a written confirmation to each of the principals (to the buyer a confirmation of sale and to the seller a confirmation of purchase), setting forth the specifications of the trade as made by him. Upon receipt of said confirmations, the parties thereto shall carefully check all specifications named therein and, upon finding any differences, shall immediately notify the other party to the contract by wire or telephone, and confirm in writing. In default of such notice the contract shall be filled in accordance with the terms of the confirmation issued by the broker.

Rule 3—Bills of Lading. (a) Bills of lading attached either to invoices or drafts shall be original and negotiable, and in conformity with the specifications of the contract on which the shipment is to apply, and shall be signed in accordance with rules of carriers. Any loss resulting from irregular or incorrect bills of lading shall be paid by the seller.

(b) On all shipments, the date of bill of lading signed by the agent of the railroad issuing same shall be conclusive evidence of date of shipment in the absence of fraud.

Rule 4—Demurrage and/or Additional Charges. The seller shall be liable for any demurrage and/or additional charges accruing on hay or straw billed to



PART OF THE NEW YORK DELEGATION

the roads had to build and maintain their lines. Waterways are useful chiefly where population is as dense as in Europe. The time will come when we will need them in this country and waterways should be kept open against that time. He gave a few statistics which showed conditions in a graphic way: In 1914 it cost \$2,300,000,000 to run the railroads of the United States; in 1920 it cost \$6,000,000,000. During that time labor's share of the cost rose from 43.2 per cent in 1914 to 59.3 per cent in 1920. The net income of all roads in 1912 was 4.42 per cent of the capital investment; in 1920 it was .32 of 1 per cent. He reminded his hearers that the roads were theirs. As shippers they had to bear the burdens, and he left the

"shipper's order," when such charges can be shown to have accrued by reason of the inability of the buyer, through act of seller or his agent, to get possession of the bill of lading, whenever said bill of lading is necessary to furnish disposition.

Rule 5—War Tax on Freight Charge. On all hay or straw sold at a delivered price it shall be the duty of the seller to pay the Federal freight tax. The buyer shall pay such Federal freight tax where hay or straw is sold at a price f. o. b. shipping point.

Rule 6—(a) Immediate or Rush Shipment shall mean shipment within three (3) calendar days from the day directions are received by seller, Sunday and holidays excluded.

(b) **Quick Shipment** shall mean shipment within five (5) calendar days from the day directions are received by seller, Sundays and holidays excluded.

(c) **Prompt Shipment** shall mean shipment within

ten (10) calendar days from the day directions are received by seller, Sunday and holidays excluded.

Rule 7—Incomplete Shipment. When the seller finds that he will not be able to complete a contract within the agreed limit, it shall be his duty at once to advise the buyer by mail, telephone or telegraph, whereupon it shall be the duty of the buyer at once to elect either to buy in or to cancel the deficit, or, with the consent of the shipper, to extend the contract to cover the said deficit.

If the seller fail to notify the buyer of his inability to complete his contract, as above provided, the liability of the seller shall continue, until the buyer, by the exercise of due diligence, can determine whether the seller has defaulted, when the buyer shall immediately (a) agree with the seller upon an extension of the contract to cover the deficit, (b) cancel the contract outright, or (c) buy in the deficit for the seller's account.

Rule 8—Incomplete Delivery. When the seller fails to complete a contract for delivery, within the agreed time, it shall be the duty of the buyer immediately to extend, buy-in, or cancel the deficit, said deficit to be determined by the quantity already weighed up, plus sellers' weights or estimates on shipments arrived, but not yet weighed. Wherever sellers' weights or estimates have not been furnished on shipments not yet weighed, it shall be the duty of the buyer to estimate the weight, for the purpose of fixing the deficit.

Rule 9—Carload. A carload shall be ten (10) tons, unless otherwise specified at time of purchase.

Rule 10—Governing Weights and Grades. Unless otherwise specified at time of sale, first official market destination weights and grades shall govern. Where official weights or grades are not obtainable, weights and grades shall be determined by affidavit of competent disinterested party at first destination, (or the traveling inspector of The National Hay Association).

Rule 11—Reshipment. Reshipment of hay or straw by the buyer from first point of destination shall constitute acceptance by the buyer of such hay or straw, except in a case where a car has been manifestly plugged.

Rule 12—Refusal of Shipment. Failure to make any shipment in keeping with the terms and conditions of a contract shall be grounds for the refusal only of such shipment or shipments, and not for the rescission of the entire contract or any other contract between buyer and seller.

Rule 13—Arbitration. In cases of arbitration of disputes resulting from transactions in hay or straw where one or both parties to the dispute are members of trade associations or exchanges that have adopted these rules, these rules shall define the rights of the parties and shall be the basis of award.

Rule 14—Invoices. It shall be the duty of the seller to mail to the buyer an invoice, giving the initial, car number, point of shipment, weights and if possible, number of bales and route; and shall also name the contract on which the shipment is to apply and the amount of draft if any; also to furnish separate bills of lading and to make separate drafts for each car, unless otherwise agreed upon.

Rule 15—Disposition Off Grade Hay. Should any of the hay or straw in the cars when inspected at destination be found of a different grade than was specified in the contract, the buyer shall notify the seller immediately by wire, and if not otherwise instructed by the seller within twenty-four hours after having telegraphed notification, shall exercise due diligence to dispose of said goods at once, and to the best possible advantage for account of the shipper.

Rule 16—Collections and Fees. All claims submitted the secretary for collection shall be properly supported.

The Association shall only attempt to collect claims when presented by a member of this organization. No claims will be entered which have previously been through the courts, in the hands of attorneys or collection agencies.

No claims will be entertained that amount to less than \$5.

A charge of 15 per cent of the amount collected or a minimum of \$5 will be made.

Rule 17—Shortage, Damage and Overcharge. All claims for shortage or damage shall be made by the buyer within ten (10) days after arrival, and must be accompanied by paid expense bill with railroad agent's notation as to damage; likewise condition of equipment and seals. Upon receipt of complete papers covering freight overcharges on delivered sales, and an affidavit of weights as taken at the time of the unloading of the car, seller shall immediately reimburse buyer. If buyer does not comply with these provisions, seller will undertake to collect claim for account of buyer.

WEDNESDAY AFTERNOON SESSION

After the final session had been called to order, Geo. A. Bridge made a report for the special committee appointed to secure the elimination of hay from the list of articles which the Department of Agriculture announced it was ready to grade and inspect. Mr. Bridge stated that the Secretary of Agriculture had assured him that the Department

did not intend to inspect hay unless specially requested to do so by the owner, and that it had no money to do it even if it wanted to. The committee, upon motion carried, was continued for another year.

SECRETARY TAYLOR'S REPORT

Secretary J. Vining Taylor gave his annual report as follows:

It is with considerable pride as well as pleasure that I submit for your consideration my report as your secretary-treasurer for the twelfth consecutive time.

We have just passed through one of the most unsatisfactory years, to my notion, in the history of my connection with the Association or of the hay



BOOSTERS FOR THE PITTSBURGH MARKET
John Dickson, G. A. Schnellbach, W. C. Hedill, Ren Martin

trade. There have been reasons for this, of course; first, a reaction from the World War; and second, the exorbitant freight rates which were imposed upon us by the railroads. However, I am not going into a strain of pessimism here, but shall simply endeavor to make this report as short as it is possible to do in an intelligent way.

Crop Conditions

The old crop of hay, taking it as a whole throughout the United States, is pretty well cleaned up. Figuring on reports received from 27 states, we find about 13 per cent of the old hay back. Some states haven't anything left and others run between 10 and 25 per cent, and in one instance the holdover amounts to 37 per cent.

The growing crop, according to recent statistics, shows a tonnage of both tame and wild hay amount-



D. S. MULLALLY AND JOHN E. MURRAY

ing to 96,961,000 tons as against 108,233,000 tons last year; or 103,397,000 tons, a 5-year average. So you can readily see that we are short about 11,372,000 tons from last year's crop; or 6,436,000 tons from the 5-year average.

As I understand it, there is very little export demand, as a matter of fact, the freight rates would be prohibitive if there were. Canada, this year, I believe, will do very little business in the States, at least this is the information coming to us.

Throughout the replies received to a recent inquiry on crop conditions, it was pleasing to note the optimistic strain that prevailed. We believe that business is on an upward trend and that the worst is over. In nearly three hundred replies from shippers, in answering one question as to what was keeping down the movement of hay, about 97 per cent made the statement that it was caused by high freight rates.

And in this connection, I beg leave to state that your Association has done everything within its power, through its traffic manager, Transportation Committee and secretary, to get some concession which would permit your moving the commodity in

which we are all interested. I shall not go into detail as to what we have done because Mr. Sims, our traffic manager, will cover that thoroughly.

Secretary's Movements

Upon the close of our last convention, and hardly before we had had time to get settled into our normal routine, I had a request from our president, Mr. H. G. Carter, to come to Richmond and assist him in making up a list of committees. This was done. Mr. Carter was extremely enthusiastic over his election, in fact mentioned to me that he had received what he considered the greatest honor that had come to him in his business career.

Hardly had I reached my office, upon my return from Richmond, August 28, when a telegram was received advising me that Mr. Carter had been killed on the 27th of August in an automobile accident. Naturally, this was a shock to us all. It meant the undoing of all that had been accomplished up to that time, and the selection of a new president. A call meeting of the directors was set for September 1 in Chicago, the purpose of which being to select Mr. Carter's successor. Mr. R. M. White, of Duluth, Minn., was offered the presidency and accepted.

Your secretary attended the Ohio Grain Dealers Convention in Cedar Point soon after our last convention.

September 8, the State of Idaho, which had recently enacted a law making it compulsory to inspect hay at point of shipment, adopted our grades in full, and requested the approval of their chief inspector and his deputies. Your secretary later on went to Boise and other points in that state and completed that job, with the result that we now have in Idaho 11 approved inspectors working under our grades and approval.

September 30 I attended the National Industrial Traffic League meeting in Louisville, Ky., making an effort to get some support from that organization in respect to preventing an increase in demurrage charges. The League, however, voted to pass on the Special Committee's report of \$3, \$6 and \$10 per day, although the Executive Committee of the Industrial Traffic League did not approve of this increase.

October 11 I attended the Grain Dealers National convention in Minneapolis, meeting President White and returning home with him to assist him in cleaning up some unsettled matters connected with this Association.

October 15 your Directors signed a resolution condemning any legislation which might effect a change in our existing system of weights and measures.

November 8 a conference was held in the city of Chicago with shippers from Ohio, Michigan, Wisconsin and Kansas, and representatives from Cincinnati, St. Louis and Chicago regarding the method of grading in terminal markets, complaints having reached us that some markets were using an "in" and "out" inspection and quoting the trade a grade of "choice" Timothy hay. The result of this meeting was that your secretary was instructed to request the markets, and shippers also, to discontinue using the word "choice" in any and all quotations as the National Hay Association at that time did not recognize a grade of that kind.

November 8 a meeting of the Board of Directors was held in this city and the date and place of our convention was set for August 23-4, to be held in Chicago.

Upon request of your secretary to the Board, at the above meeting, as to something being done regarding advance in demurrage and the charges for reconsignment, as well as the exorbitant freight rates, your traffic manager was instructed to file formal protest in each case.

January 10 a conference was called in Chicago before Interstate Commerce Commission Examiner Quirk in respect to increased demurrage charges. This meeting, however, was later called off.

January 23, I attended a meeting in Pittsburgh of traffic officials in the matter of reconsigning charges on hay, and at the same time represented the Association at the funeral of Mr. Samuel Walton, of that city.

Mr. Sims will no doubt include in his report his appearance before the Commission in Washington, January 31 in the matter of I. & S. Docket 1350, covering the \$7 reconsignment charge in which the Commission ordered all carriers to file on 30 days notice a revised reconsigning tariff to provide for the elimination of this charge on cars refused at first destination, unless the cars had been previously placed on consignee's private siding. This meant that cars might be reconsigned at first destination (unless they had been previously placed on consignee's private siding) on same basis as cars diverted enroute, i. e., \$3 per car.

February 8 the Central Freight Association, Freight Traffic Committee, met a committee from this organization, headed by Mr. Sims and Mr. White, to hear our reasons for a reduction in freight rates. Several members were present at the hearing but much to our regret the meeting resulted in a turn-down.

On March 10 your secretary met with Arbitration Committee No. 1 in St. Louis to dispose of such cases as had been brought to their attention. At the same time I met the inspector from the Spring-

field. Mo. market. Mr. Andrew J. Dudley. I spent two days in examining him and recommended his approval.

March 14 there was a conference in Chicago in regard to the rate question, the same having been called by allied interests for the purpose of combining forces, but after reaching Chicago we found that the meeting had resolved itself into one for the purpose of organizing permanently. Their interests seemingly were not in common with ours so we immediately returned home.

April 27 I attended a meeting of Arbitration Committee No. 2 in Cleveland, at which time this committee handled all cases which had been placed before them for disposition.

On March 30 the State of Washington advised us that their legislature had passed a law compelling state inspection and that the Agricultural Department had prepared rules entirely different from ours, so we immediately withdrew the approval of all inspectors in that state. Our members should govern themselves accordingly.

(By-the-way, if you want to read something extremely ridiculous, get hold of a copy of their grades and read them.)

On May 9 I met your president in Chicago to complete final arrangements for this convention.

August 3, upon instructions from the last convention a meeting of the Grade Committee and inspectors, as well as others interested in the matter of grades, was held in this city for the purpose of revising the grades. As the report of the chairman of your Grades Committee covers this fully, I shall pass along.

Transportation

There is little need of my saying anything to this intelligent gathering of men as to the treatment at the hands of the railroads since the close of the war. The exorbitant freight rates have absolutely paralyzed our business, and as you will note, when I gave the membership statement, there have been nearly 100 firms compelled to close up their business because they could not ship hay and make a living. In other words, it has localized the business because in many instances the freight rate has amounted to more than the hay would bring per ton on the market. Previous to the grain movement, there were thousands and thousands of idle freight cars rusting on the railroads for lack of tonnage. Possibly, this is good railroading but your secretary could not see it in that way.

An appeal, one after another, to our members has been extremely disappointing, in so far as the response received was concerned. As a matter of fact, and I am speaking frankly, little or no support has been given your traffic manager and secretary in building up a tangible, intelligent mass of data to present to the Commission in defending our position for lower freight rates. At the same time we have been severely criticised for not having accomplished something material.

During the past year we have approved 15 inspectors and have withdrawn approval from all inspectors in the state of Washington and Arizona. Therefore, we have working at this time, under our approval, 31 inspectors, and the following markets have adopted our grades in full since the last convention: Detroit, Mich.; Huntington, W. Va.; Memphis, Tenn.; Milwaukee, Wis.; Milk River Valley Hay Growers, Chinook, Mont.; Springfield, Mo.; State of Idaho. We hope with the grades that are to be presented to you as revised that every market in the United States will fall in line and use them as their standard.

Trade Rules

The past year has thoroughly convinced our office of the necessity of revised trade rules, bringing them more up-to-date, and making the terms used plainer. With this in view, your president appointed a committee to revamp and redraft these rules with some suggestions from our office. Mr. Sale has made this report for Mr. England, the chairman, and we are indeed indebted to them for what we consider the most perfect set of trade rules in existence, and if our members will use them in all their transactions, there will be less trouble for the Arbitration Committee and the secretary's office.

Arbitration

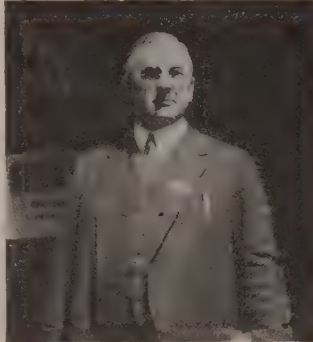
This phase of our work can always be counted upon, and we find that we have handled, since the last meeting in Cincinnati, 231 cases, classified as follows: Compromised, 23; paid in full, through secretary's office, 18; decided by Committee, 6 (and this does not include the cases decided yesterday); cases now in the hands of the Arbitration Committee, 7; cases withdrawn, 6; cases appealed, 2; cases in which members were suspended for refusing to arbitrate, 14; cases under preparation, 6; cases of minor importance, unrecorded, 149.

Your secretary would like very much, indeed, to see some arrangement brought about, an understanding as it were, between the Grain Dealers National Association and this organization whereby a firm, individual or corporation, who has been expelled or suspended by either for cause, shall not be allowed to join either organization until the matter at issue has been satisfactorily adjusted. I further believe that it would strengthen both organizations if we

could exchange lists of firms who have been investigated and found unworthy of business confidence. To my mind, this would make a membership in either almost invaluable.

Traveling Inspectors

We hoped at the last meeting that conditions would so right themselves that we could keep a traveling inspector in the field the better part of this year, but it was not many weeks until we found out that it would cost the Association so much that what little balance our treasury contained would be wiped out. So I consulted your president and he agreed



D. S. WRIGHT

with me that until conditions were better that Mr. Longnecker should cover only the points that seemed necessary and answer trouble calls.

I could take up an hour of your time, if I should report in detail on Mr. Longnecker's activities, but I shall not do this. I shall just briefly state that he has covered 27 cities on the Association's expense, and has answered 12 trouble calls, the expense on these calls being paid by the parties requesting the service.

The past year has convinced us that this service is needed but that it is impossible for one man to cover the entire United States. I, therefore, recommend that traveling inspectors be appointed in every



WARREN H. DEAN

part of the country, working on a per diem and expense basis, for instance one in the southeast, southwest, northwest, northeast and central states, and the traveling inspector take care of as many calls as possible, especially where they are within a one night's ride; these inspectors to be under the secretary's office and subject to our call. It is further understood that the traveling inspectors, when it is practicable to do so, shall make the rounds and check these men up.

Membership

We hasten through this because it is a subject that is not at all pleasing to mention at this time for the reason that it has been the most discouraging year since becoming your secretary, but when we take into consideration business conditions, in fact, everything that goes to make up a successful year, we suppose we have no reason to complain.

I want to pause here just a moment and pay tribute to a very faithful servant, Mr. Geo. F. Brown, the chairman of your State Vice-Presidents, who deserves the praise and commendation of this entire organization for his untiring efforts and devotion to your

interests. Words fail me when I try to express how grateful we are for his assistance and pleasing co-operation.

During the year just ended we have received 181 new members; we have dropped for various causes, 348, making a net loss of 167. Of course, this, to some extent, has been brought about through the increase in dues, but we believe that it simply means the winnowing out of the chaff from the real kernel of the grain.

With your permission I shall now give you the statistical part of this report:

Finance

Balance on hand July 1, 1920....	\$14,464.42	
Liberty Bonds	4,500.00	
Receipts from all sources 1920-21 ..	22,135.55	\$41,099.97
Total disbursed 1920-21.....		23,616.62
Total		\$17,483.35

"The National Hay Press"

Received from advertisements		
1920-21	\$ 3,526.37	
Received on subscriptions.....	710.50	\$ 4,236.87
Less printing, postage and other expenses		3,894.76

Total		342.11
Due on advertisements to date.....		362.22
		\$ 704.33

Membership

Membership July 1, 1920.....	1,723
Membership July 1, 1921.....	1,556
Loss	167

"The National Hay Press"

While we have not made as good showing this year as we did last, we are not ashamed of the year's work on this little paper, because everything that went into the make-up of this magazine has doubled and trebled in price, and then too, some of our good friends who were helping us with advertising space felt that they should retrench and withdrew their ads. We hope in the near future to have a reduction from our publisher, and we will give our members the benefit of this.

Deaths

There is one part of my report that I always regret to have to make and that is on the death of members of this organization. But, gentlemen, one by one they are answering the roll call and it is hard to tell who will be the next man tomorrow. For instance, who would have dreamed of H. G. Carter, Samuel Walton, George Crampton, and men of that type, who were with us last year, answering the call so suddenly? Our Memorial Committee has reported to you the death of 15 men.

I need not dwell on this part of my report because I am already taking up too much of your time.

Personal

The only sadness that has marred the uninterrupted term of service as your secretary was the sudden and unexpected death of two of the noblest men that it has been my honor to have among my friends—Samuel Walton and H. G. Carter. I shall not attempt to express to you gentlemen just how this affected me, because they were men of the highest type and truest friends in the world, as all of you are aware.

In the selection of Mr. Carter's successor, we were, indeed, most fortunate, and your directors deserve commendation. Lest Mr. White should feel that I am spreading it on too thick, I shall not dwell at length as to his many sterling qualities and fitness as your executive, but if he has made a move in the wrong direction, or one that was not for the interest of this organization and its members, it has not come under our notice. Gentlemen, he has served you faithfully and true. As a matter of fact, he has neglected his private affairs and his home, to some extent, to go where duty called him. And along with the other noble men, whose names have gone down in history, and whose names have gone into the hall of fame, I, for one, desire to see Mr. White among these honored men.

To all officers and committeemen we are most grateful for their contribution during the year just closed. Our members know that the officers of this organization are simply helpless without their co-operation, counsel and advice.

To my office force I can but repeat what has been said in former years, i. e., that they have been faithful to the trust; on the job at all times and working for the interest of the organization.

In addition, I wish to call upon you and register this request right now, i. e., by saying that the coming year is going to be one of trials and tribulations; it is going to mean a fight every inch of the way, which means that we shall need, as never before, your help, and I am asking you with all my heart and in sincerity that when we ask you to help us you know it is for your interest and the interest of our organization. In these times we cannot write every member of this Association a personal letter—that would be out of the question—so we have to do the next best thing and send you a multigraph appeal. But you must consider it just as important, and I ask you again to pledge your faith to the cause for which we are working. If you will do this, you will find that you will get out of it just what you put into it.

In closing, I want to try to impress upon you gentlemen with all the seriousness that I am able to command the necessity for a closer affiliation the coming year. I am not one bit pessimistic but I believe there are trials and tribulations ahead of us. It is going to be a fight every inch of the way, which means, as never before, that your help, advice and counsel must be thrown into the work when you are called upon by our office. You gentlemen know, or at least you should know, that it is for your interest that we ask you, at times, to give us your co-operation. We cannot write every member a personal letter—that would be out of the question—so when you get a multigraph letter from us, you should consider it just as important as if individually written.

I again ask you to pledge your faith to the cause for which we are all working, and if you will do this wholeheartedly and sincerely, you will find that you will get out of it just exactly what you are willing to put into it.

Gentlemen, I thank you for your patience, for your long suffering and charity during my years of service. It has been one of the bright spots in my life. May you have a successful year, and may the Divine Maker spare you to meet at many more of these conventions.

ELECTION OF OFFICERS

Upon motion the officers, as proposed by the Nominating Committee, were declared elected when the secretary cast a ballot to that effect as directed: President, W. I. Biles; first vice-president, F. A. Coles; second vice-president, A. E. Nicholls; Board of Directors, R. M. White, Rudolph Raabe, J. T. J. Walton, George F. Brown, W. H. Dean.

The Committee on President's Report recommended that the report be adopted as read without the proposed changes.

HORSE ASSOCIATION OF AMERICA

Wayne Dinsmore, secretary of the Horse Association of America, made an interesting address on the horse industry, giving a great mass of pertinent data which had a direct bearing on the business of every hay dealer. He showed how horse deliveries in cities were cheaper than by motor truck, giving the testimony of the meat packers and the Fair Department store in Chicago as evidence. He said one difficulty in getting the horse back into service was the difficulty in finding stable room and urged dealers to lend their aid in finding stall room for as many horses as possible, as every additional horse in a community meant an addition of at least \$10 to the profits of the hay dealer.

After Mr. Dinsmore finished a resolution was adopted recommending every shipper to give to the Horse Association 10 cents for every car of hay handled through the year, immediate payment to cover the shipments from January 1 to August 1, and the second payment to be made in January, 1922, covering the balance of this year. In addition several hundred dollars was pledged direct by the individual members.

I. L. Sutherland presented the resolutions which were adopted. These thanked the officers for their work and the speakers, the Chicago Board of Trade, and the Hotel Sherman for their courtesies during the convention. An addition resolution was adopted as follows:

Whereas, It has been forcibly brought to the attention of this Association through its membership that there is a steadily growing practice on the part of farm bureau agents in the employ of state and Federal departments to align themselves with the commercial activities of so-called co-operative buying enterprises composed of feed and hay consumers; and

Whereas, In the opinion of this Association such activities were never presumed to be part of the functions of a state or Federal employe and constitute in effect a misuse of public funds, and

Whereas, Such usage of public funds constitute a form of class discrimination in industrial life at the expense alike of business interests, of consumers, all taxpayers, virtually constituting thereby a subsidy; therefore, be it

Resolved, That this Association, while recognizing the inherent right of any class to organize within legal bounds for its legitimate benefit, and while conceding basic principles of organization, deeply deplore this seeming Government approval of a form of class legislation; and be it further

Resolved, That every member of this Association take due cognizance of this state of affairs and take steps to protest to his representative in both state legislatures and Federal Governments, to the end that all business receive justice in the circumstances.

The new officers were introduced and appropriate remarks made, after which President Biles declared the meeting adjourned *sine die*.

THE BANQUET SESSION

The banquet on Tuesday evening at the Drake Hotel, given by the Chicago Board of Trade, elicited much praise for its material and mental excellence. Joseph P. Griffin acted as toastmaster and addresses were made by Walter Lichtenstein, executive secretary of the First National Bank of Chicago; J. Ralph Pickell, editor of the *Roundup*; W. I. Biles, and P. E. Goodrich.

Mr. Lichtenstein covered the world's financial



DIRECTOR RAABE PRESENTS HIS ST. LOUIS FRIENDS
Jas. W. Dye, C. T. Wade, W. H. Toberman, Rudolph Raabe

situation in an able and interesting way, dealing with the credit and foreign exchange questions in a way that everyone could understand.

Mr. Pickell had for his subject "The Prairie," and he spoke fearlessly of some of the perils that threaten the welfare of that part of our domain.

"Nothing could be more un-American," said Mr. Pickell, "than the efforts of Senator Capper and other agrarian agitators to turn honest farmers against great business institutions such as the grain exchanges by dissemination of inaccurate statistical information and false reports of deliberate price depression.

"What Senator Capper has accomplished is to place blasts of self-praise on the front pages of the newspapers. This success is due largely to



COMMITTEE ON STATISTICS

the fact that the average editor is so loaded down with work that he hasn't time to analyze the sensational pronouncements.

"The congressional records are bristling with deliberate misstatements which Senator Capper made for the purpose of tricking the farmer into believing he was actually 'fighting' in his behalf and to place himself in the limelight. If the newspapers were to discontinue publishing his bold attacks and sweeping pronouncements he, like other agitators, would soon tire of being the farmer's

"It takes a long stretch of the imagination to justify the grain-pooling plan now sponsored by the self-appointed farmer leaders. Any farmer who reads through the 15,000 words of the contract and the two accompanying documents will find that he is signing away his grain for five years with nothing in return but promises. Legal analysis of the contract shows there is no limit to expenditure of the farmer's money and absolutely no security for him after he pools his grain.

"Still the farmer agitators, under leadership of

Senator Capper and others, would rip down the existing marketing machinery which has served the farmer successfully for half a century and replace it with all this beautiful theory, with golden dreams, with the same sort of match-box structure that is now going to pieces in Russia amid the despairing cries of a hunger-mad populace.

"In America professional politicians and selfish organizers are given too much liberty. They are permitted to abuse and strike blow after blow at the great business institutions if they will but slip on the false whiskers of the benefactor, whether their victims be the laborer, the clerk or the farmer. American business is founded on American ideals.

"It is high time that Senator Capper and the other self-styled friends of the farmer removed their false whiskers. The farmer is tired of it all. He has begun to think for himself. And that is always dangerous for the agitator."

After President About-to-be-Elected Biles, and P. E. Goodrich, former president of the Grain Dealers National Association, had spoken briefly, one of the most enjoyable affairs of the kind ever held by the Association was brought to a close.

THE ATTENDANCE

As was anticipated, there was a falling off in attendance at the convention, due to the prevailing business conditions throughout the country. Nevertheless, there was a goodly number of each session, divided in about the usual proportion between country shippers and receivers. Those in attendance from the principal hay centers were:

BALTIMORE

Geo. E. Morrison, Geo. E. Morrison & Co.; C. R. Melcher, Inspector, Baltimore Chamber of Commerce.

BOSTON

L. W. Todd, Albert Todd Company; Henry A. Bascom, Lord & Webster Company; H. M. Stowell, C. F. & G. W. Eddy, Inc.

CHATTANOOGA

C. E. Server, Chattanooga Hay & Grain Exchange; Abe Winer, Winer Feed Company; Chas. F. Crain.

CHICAGO

J. A. Benson, J. A. Benson Company; Geo. S. Bridge and John R. Leonard, Bridge & Leonard; J. P. Griffin, president Chicago Board of Trade; C. J. Da Silva, A. F. Fisher; M. M. Freeman, M. M. Freeman & Co.; M. R. Glaser, Rosenbaum Brothers; H. L. Randall, T. D. Randall & Co.; H. R. Campbell; J. U. Crosby, Arcady Farms Milling Company; H. S. Eutton, Walters Bros.; C. R. Mumford, W. R. Mumford & Co.; Edwin Anda, Edwin Anda & Co.; C. E. Walters, Walters Brothers; Geo. A. Gibbons, Gibbons Hay Company; C. H. Davis; W. B. Manchester, W. B. Manchester, Inc.

CINCINNATI

John F. Kelly, J. F. Costello Grain & Hay Co.; Chas. B. Hill, Ralph Gray & Co.; B. J. Drummond, Cincinnati Grain & Hay Exchange; Tom Dugan, T. M. Dugan & Co.; Earl F. Skidmore, Brouse-Skidmore Grain Company; H. E. Niemeyer, H. E. Niemeyer Commission Company.

KANSAS CITY

J. A. Brubaker, J. A. Brubaker & Co.; W. G. Zimmerman, Carlisle Commission Company.

MILWAUKEE

W. J. Armstrong; Anton Felton, Deutsch & Sickert Company.

MINNEAPOLIS

H. L. Elliott, Campbell Commission Company; Edwin A. Olson, Johnson-Olson Grain Company.

NEW YORK CITY

F. M. Williams, W. D. Power & Co.; H. L. Post, H. A. Post; John E. Murray; J. G. Franghiadi, F. W. Williams, Inc.; J. M. Shelley, Geo. E. Van Vorst; Wm. H. Clark, Wm. H. Clark & Co.; E. B. Dusenberry, E. B. Dusenberry, Inc.; Geo. W. Williams.

OMAHA

Nels Parsons, Parsons Commission Company; J. C. Pederson, Omaha Hay Exchange.

PHILADELPHIA

Jos. F. Huey, Wm. A. Huey; Norwood P. Holland, E. L. Rogers & Co.

PITTSBURGH

Jos. T. J. Walton, Samuel Walton Co.; W. C. Hodill, B. McCracken & Son; H. G. Morgan, H. G. Morgan & Co.; G. A. Schneibach; C. A. Gibney, Geo. E. Rogers & Co.; Ren Martin, Herb Bros. & Martin; John Dickson, Geidel & Dickson.

SIoux CITY, IOWA

C. A. Burgeson, Acme Hay & Mill Feed Company; H. W. Milligan.

ST. LOUIS

W. H. Toberman, Toberman, Mackey & Co.; S. P. Steed, Nanson Commission Company; Eugene Smith, secretary Merchants Exchange; Jas. W. Dye, Toberman, Mackey & Co.; D. S. Mullally, Langenberg Bros. Grain Company; R. P. Atwood.

ST. PAUL

Jas. F. O'Meara, St. Paul Board of Trade; J. K. Nielsen, State Grain Inspection Department.

TOLEDO

John L. Wiser, Raymond P. Lipe Company; Geo. W. Churchman, Raymond P. Lipe Company; W. W. Cummings, J. F. Zahm & Co.; S. L. Rice, Rice Grain Company.

OTHER CITIES

Brooklyn: Chas. Schaefer, Chas. Schaefer & Son; Cleveland: H. W. Robinson, The Co-operative Union Elevator Company; Denver: N. A. Anderson, Anderson Hay Company; Duluth: R. M. White, White Grain Company; Los Angeles: Albert Nicholls, Nicholls-Loomis Company; Memphis: Walter M. Browne; Peoria: E. M. Sprecher.

NEWS LETTERS

KANSAS CITY

B. S. BROWN - - CORRESPONDENT

GENERAL sentiment in the Southwest is more bullish than bearish, according to numerous country advices, interviews with millers, shippers and elevator operators. The action of the market, however, has not always reflected this view. Confidence in higher prices is based chiefly on the limited yield and the unexpectedly large domestic and export requirements since the first of July. At the same time it is admitted that general economic conditions are unfavorable for an advance in any commodity. Credit conditions are such that there is little speculative buying at present, which is helping to hold the market down at a time when perhaps a majority think that grain, particularly wheat, is worth more money.

The reductions in freight rates on export shipments of grain from the Middle West to the eastern seaboard and the Gulf ports, authorized recently by the Interstate Commerce Commission, will probably not have any great effect on the movement of grain from Kansas City or nearby points. To eastern points the reduction was equal to 7½ cents a hundred and to Gulf points it was 5½ cents. As there was already a big difference in favor of the latter, the revised rates will not make any change in the differential. Most of the export wheat from this territory will continue to move out to New Orleans and Galveston. The feeling prevails that these reductions will mark the beginning of general reductions in all rates. Only wheat originating at country points will move under the reduced rates. Grain enroute or in terminal elevators will not be affected.

Three members of the Kansas City Board of Trade—Guy Moore, H. J. Dissenbaugh and W. H. Marshall—have brought suit in the United States Circuit Court to restrain officials of the State of Missouri from enforcing the act passed a few months ago to regulate boards of trade. The officials of the Board of Trade are included in the suit which asks that they be restrained from complying with the law. The hearing, which is to be before Judge Kimbrough Stone, is set for September 15.

The new law creates a state bureau of marketing and authorizes the State Board of Agriculture to appoint a state marketing commissioner. It requires commission men in the cities to obtain licenses and provides a fee of \$25 for commission merchants whose annual gross volume of sales amount to \$100,000 or less, with an additional \$10 for each \$50,000, or major fraction thereof, in excess of \$100,000. The fees go to the state treasury, constituting a fund for enforcing the measure.

One of the provisions most objectionable to commission men, B. L. Hargis, president of the Board of Trade, pointed out, is that prohibiting any two or more members of a trading exchange from entering into an agreement to limit any other member in the exercise of his right to distribute profits among shareholders in the firm or association in which he is interested, in proportion to the quantity of grain shipped to such member by persons composing the partnership or association.

"The bill also declares," said Mr. Hargis, "that any farmers' co-operative company must be admitted to membership, but makes no provision as to the financial soundness of such a company; nor does it make any provision whereby the governing body of the exchange can make inquiry as to the character and standing of the applicant. This bill is, in our opinion, much more radical and destructive than the Capper-Tincher Bill, and we believe it to be unconstitutional."

It was necessary to file the suit at this time, Mr. Hargis said, because the act provides that if any representative applies for membership in an exchange and his application is then protested in the courts by the exchange, such action will then be taken as *prima facie* evidence of guilt.

Kansas City wheat receipts in August were 12,386 cars, nearly double those of August, 1920, and the largest on record for the month except in 1919. In July and August wheat receipts were 26,592 cars, compared with 11,335 cars in the corresponding time a year ago and 24,267 two years ago, the previous record. In bushels the two months' receipts were 35,000,000 bushels this year and 15,000,000 bushels last year. Arrivals of corn in August, 702 cars, were

more than double last year's and a little under the 10-year August average. Oats receipts in August were 1,092 cars, compared with an average August movement of 753 cars.

A reduced acreage of wheat in Kansas this fall is the forecast of J. C. Mohler, secretary of the State Board of Agriculture, due to prevailing climatic and market conditions.

All roads in Kansas have filed application with the Interstate Commerce Commission to reduce rates 3 cents a hundred pounds for grain from Kansas to Gulf points. The reduction would be effective on 10 days' notice.

L. B. McBride, a banker of Nortonville, Kan., is an applicant for membership in the Kansas City Board of Trade on transfer from Thomas R. Smith, whom he succeeds as second vice-president and manager of the Equity Union Grain Company.

Kansas markets, particularly Salina, Hutchinson and Wichita, have been receiving a much larger amount of wheat than usual this season, the arrivals at the different markets frequently ranging from 200 to 300 cars a day. Most of it is being absorbed by mills in those districts and by brokers representing eastern mills. Ordinarily the smaller Kansas markets ship a good deal of wheat direct to Kansas City, but that has not been the case this season, as mill buyers and the Gulf have been bidding a little over the Kansas City basis. Only moderate quantities are being shipped to the Gulf at present, it was said. At the larger markets most of the grain is arriving on consignment, despite the fact the market was inclined to sag for several weeks.

All efforts to prolong the life of the Farmers' Co-operative Terminal Marketing Association were abandoned recently, according to a report from Salina, Kan., when delegates from Kansas and Missouri met in convention. The Association was organized in Salina a year ago with a capital stock of \$250,000. It was composed of members of several other farmers' organizations, the most of which joined with the farmers' union and withdrew their strength from the marketing association. At the recent Salina meeting, the delegates being unfavorable to neglecting their own jobbing association at Kansas City, decided not to continue the new venture alone. If at any future time other farmers' associations decide to new venture it will be taken up again, it was said.

The Kansas City Board of Trade recently adopted appropriate resolutions regarding the death of Louis J. Long, manager of the Kansas City Bag Company. He had been a member for nearly 25 years.

E. E. Love of the Fuller Grain Company recently won an Elgin motor car in a raffle. The ticket cost \$1.

Initial deliveries in September contracts at Kansas City were 1,000,000 bushels of wheat, 810,000 bushels of corn and 100,000 bushels of oats.

E. O. Moffatt, president of the Moffatt Grain Company, has been re-elected a member of the Kansas City Board of Trade, on transfer by certificate from his son, J. Donald Moffatt. The elder Mr. Moffatt recently announced his retirement from active business and sold his original membership for which he paid \$25 nearly 30 years ago. Frank O. Everts has also been elected a member. He will be associated in business with his cousin, Ralph Orthwein. John F. Sugrue of the Armour Grain Company has been elected to membership on transfer from T. P. Gordon.

The Wyandotte County, Kansas, Commissioners recently received a notice from the State Tax Commission that a refund of \$7,320 was due the Armour Grain Company on its 1920 tax payments, which totaled \$15,184. The notice explained that evidence had been submitted which showed the company had been wrongfully levied in that it paid taxes in the city of Kansas City, Kan., and school board levies when the plant in reality is outside of the limits named. This is the largest refund in several years.

A bulletin from the office of the Kansas City Terminal Railway the early part of August said that unless grain dealers did everything in their power to expedite the movement of grain from local railroad yards, an embargo might be placed in effect. About this time the movement of wheat of Kansas City began to fall off and the congestion was gradually relieved. At one time nearly 5,000 cars were held on tracks, which is five or six times the amount

normally awaiting disposition. It was said that much of the grain was being held several days longer than necessary while a more satisfactory market was awaited.

Oscar T. Cook, formerly with the Barnes-Piazsek Grain Company, has abandoned plans to organize a company of his own and will be wheat buyer for the Southwestern Milling Company as soon as a membership can be arranged for. Mr. Cook for several years was wheat buyer for the United States Grain Corporation.

PHILADELPHIA

T. A. SIEBER - - CORRESPONDENT

ACCORDING to the monthly report of the statistician of the Commercial Exchange, the stock of grain in public warehouses in Philadelphia on September 1 was: 993,966 bushels wheat, 583,210 bushels corn and 242,160 bushels oats compared with 495,478 bushels wheat, 529,386 bushels corn and 185,894 bushels oats on August 1, and 1,141,548 bushels wheat, 62,208 bushels corn and 219,455 bushels oats on September 1, 1920. Receipts of grain at Philadelphia during the month of August were: 2,400,376 bushels wheat, 615,666 bushels corn, 341,502 bushels oats, 37,036 bushels rye and 1,195 bushels barley. Exports from this port during the month of August were: 1,286,621 bushels wheat, 488,571 bushels corn and 19,421 bushels rye.

Albert L. Hood, grain and feed merchant, and family have returned from their cottage at Ocean City, N. J. where they had been staying for the summer.

S. Townsend Zook, secretary of Ezl. Dunwoody Co., flour and feed merchants, and family have returned from their cottage at Ocean City, N. J. where they were located for the summer.

F. S. Rivera, representing J. Ochoa y Huo, of San Juan, Porto Rico, is visiting the Atlantic Seaboard Flour Mills of Philadelphia and other members of the Commercial Exchange.

Fred Griffin, of Barnes-Irwin & Co., Inc., grain exporters, and family have returned from their cottage at Ocean City, N. Y. where they have been for the summer.

A. Judson Stiles, feed merchant, and wife have returned after spending the summer at their cottage at Cape May, N. J.

Horace Kolb, vice-president of the Commercial Exchange, and family have returned from their summer home at Phoenixville, Pa.

Harvey C. Miller, Morris F. Miller and Roy I. Miller, of the firm of L. F. Miller & Sons, grain, feed and hay merchants, have returned from their cottage at Ocean City, N. J.

Lorenzo J. Riley, assistant Secretary of the Commercial Exchange, and family have gone on a trip to Atlantic City, N. J.

William M. Smith has been appointed Grain Supervisor by the United States Department of Agriculture for the Philadelphia district with offices in the Bourse Building.

Frank K. Johnson, of the grain firm of E. K. Lemont & Son, and family have returned from a two weeks' trip at Gratersford, Pa.

John B. DeHaven, now manager of the Philadelphia office of the Ladish Milling Company, has been appointed manager of the feed department at their mills in Milwaukee, Wis.

Boureau & Evans have been elected to membership in the Commercial Exchange and will operate a telegraph and telephone booth on the Exchange floor.

D. V. Heck, formerly a partner with Hardman & Heck, is now actively associated with the firm of W. F. Heck & Company, wholesale grain, hay and feed merchants, 703 Wabash Building, Pittsburgh, Pa.

Figures showing that three-fourths of the farms in Pennsylvania are worked by their owners have been completed at the Statistical Bureau of the State Department of Agriculture. The farm property in the state, including buildings, machinery and livestock, is worth over \$1,725,000,000. The number of farms is given as 202,252.

Mill ponds in the section of Milton, Del., are lower than they have been for years and are giving their owners much concern. The water in Lake Fangansyky

is very low, and the Diamond State Roller Mills are short of power and are installing a gasoline engine to keep the plant in operation. Unless rain comes soon, a number of mills will have to be closed.

A. B. Clemmer, secretary of the Commercial Exchange, and wife have returned from a trip to Ocean City, N. J., and his farm at Downingtown, Pa.

Samuel H. Young, grain merchant, who was visiting at Avalon, N. J., while swimming struck his head against the superstructure of a pier causing a deep gash in his head.

A charter has been granted under the laws of Delaware to Pequea Valley Seed Farms, Inc., to buy, sell and produce seeds with a capital of \$50,000.

Richard R. Brown, senior member of Morris Brown & Co., grain merchants, Pittsburgh, Pa., died recently after an illness of several years.

Samuel F. Scattergood, grain and feed merchant, and family have returned after spending several weeks in the Bushkill Mountains.

Erie Railroad Co., United American Lines, Inc., and James P. McGarry & Sons Co. have been elected to membership in the Commercial Exchange.

A large delegation from the Commercial Exchange, including the president, C. Herbert Bell, attended a luncheon at the Bellevue-Stratford Hotel, September 13 given by the Industrial Relations Committee of the Philadelphia Chamber of Commerce. The principal speaker was Governor Henry J. Allen of Kansas who delivered an address on "Importance of Industrial Relations."

Present indications are that the corn crop in Lower Delaware will be the largest in many years. The stalks have grown to a height of 10 feet and the ears are unusually large and heavy. Farmers are calculating on obtaining 50 bushels to the acre, which is 10 bushels more than the average yield.

It has been reported that slight frosts were visible in the vicinity of Delano, Pa., during the middle of August, the first of the season and earlier than usual.

Dr. J. G. Sanders, director of Pennsylvania State Bureau of Plant Industry, has confirmed reports of investigators who found specimens of the corn borer in eight townships in Erie County. The borer, which has been prevalent in portions of New York State, turned up in Erie County two years ago and was thought isolated in Girard Township, but seems to have spread.

The Angoumois grain moth is reported by the Pennsylvania State Department of Agriculture to be doing some damage to wheat already harvested but not yet threshed in Berks County. The report advises against the local practice of delaying threshing, because it gives the moth a chance to damage the grain.

According to the Bureau of Crop Estimates of the Department of Agriculture the condition of corn in Pennsylvania in September was 92 per cent. of normal compared with a 10 year average of 86 per cent. forecasting a yield of 67,403,000 bushels. Oats is 71 per cent of normal compared with a 10 year average of 88 per cent. forecasting a yield of 32,322,000 bushels.

Based on figures of the United States Census Bureau, the crops of Delaware farms have shrunk in value more than \$18,000,000 during the present year, compared with the products of last year and for 1919. The yield of the state was valued at \$30,421,222 for 1919.

George A. Stuart, lately stationed in Philadelphia as the Federal Grain Supervisor, has been appointed grain expert of the State Bureau of Markets. Secretary of Agriculture Rasmussen says Mr. Stuart's business will be to familiarize shippers and growers with Government grade requirements.

Due to heavy rains during the middle of August all crops in New Jersey are showing considerable improvement, except for some damage by winds and the washing of lowlands. Corn is in excellent condition generally and is earing well; there is some lodging in central and northern districts. The second crop of Alfalfa is being gathered.

The number of cars unloaded at the Girard Point Elevator during the month of August was: 803 wheat, 276 corn and 8 rye; at the Port Richmond Elevator: 464 wheat, 126 corn and 5 rye; at the Twentieth Street Elevator: 10 corn, 107 oats, 1 barley, 1 buckwheat, 1 peas and 1 Milo Maize.

Pennsylvania's efforts to keep feeding stuffs for live stock up to the mark are described in a report sent to Secretary of Agriculture Rasmussen by James W. Kellogg, chief chemist of the department. During the first six months of 1921, the Bureau of Chemistry collected and analyzed 2,322 samples. As a result of

the analyses, 20 prosecutions were ordered against dealers selling feeding stuffs not in conformity with the law.

It has long been the practice of the carriers serving Pittsburgh, Pa., to make a charge of \$2 per car for shipments on track grain held at that point for inspection and grading. A similar charge was not made by the same carriers at Indianapolis, Cleveland, Toledo and many other points. A complaint was filed with the Interstate Commerce Commission by the Pittsburgh Grain and Hay Exchange against the Baltimore & Ohio Railroad. The Commission in rendering its decision condemned the practice of the carriers as unjust, unreasonable and unduly prejudicial because the same charge was not made at the other markets mentioned. In reply to the contention of the defendants that the Exchange should not be granted reparation because it did not itself pay any of the charges and was not under its charter empowered to bring suit in behalf of its members, Commissioner Hall explained that the Exchange had specifically pointed out the names of the members who had paid the charge and said that the members of the Exchange were co-complainants with the Exchange, even though not so styled in the complaint as filed. The claims of the members, according to Commissioner Hall, arose within two years prior to Federal control and was not barred.



MILWAUKEE has been having an enormous run of grain for a few weeks which has surpassed all records. If this run of business keeps up until the end of the year, all records will have been broken for a full year and it is possible that a total of 100,000,000 bushels annual receipts will have been established for the local market. Milwaukee grain receipts for August were no less than 8,426 cars which is the highest point for any month in the history of the Exchange. The previous high record was in September, 1916, when an aggregate of 7,358 car loads were received.

The crest of the wave in high grain receipts may already have been passed temporarily judging by the total for the first week in September. This showed offerings of 1,555 cars as compared with 2,127 car loads in the week previous, 1,107 cars a year ago and 1,549 cars for the same week in 1919. The August receipts were about 2,000 carloads per week so that a ratio of arrivals of 1,500 cars per week indicates some recession in the grain movement.

The grain receipts are likely to drop now for awhile, declared one of the leading grain men of the city, whose firm has handled no less than 6,000,000 bushels of grain in the last few weeks. "The farmers will now be busy taking care of their corn and other crops and they will not have time to do so much grain marketing, I believe" he said. "A little later in the fall, I think the grain movement will flare up again to the present high volume and perhaps even more. When the next great wave of grain selling comes, it will be of all the grains and not merely corn and wheat which have made so large a portion of the recent offerings."

The division of the grain receipts is shown in the past week with reports of 162 car loads of barley, 595 cars of corn, 258 car loads of oats, 148 cars of wheat, 24 cars of rye and 4 cars of flax. Out of the total of some 1,500 car loads offered for the week, more than 60 per cent, or 900 cars of the total were corn.

Grain men of Milwaukee agree largely that there is a great volume of grain left back in the country—a good crop for 1921 and large stores of grain from last year. With these two big sources of supply, it is generally believed that grain stocks are large enough to keep up the phenomenal run of offerings for several of the fall and winter months.

The Chamber of Commerce of Milwaukee has adopted a resolution making 200,000 bushels storage in Rialto Elevator operated by Donahue-Stratton Company and 300,000 bushels storage in Elevator E operated by Taylor & Bournique Company, "regular" warehouses for the storage of grain and flax seed under the rules of the Chamber for the period ending August 1, 1922.

The September rate of interest has been determined by the Chamber of Commerce at 7½ per cent which is the same as the rate fixed one month ago.

Milwaukee flour stocks are not very far from normal with 18,000 barrels reported in round numbers for the opening of the month of September. This compares with 16,000 barrels approximately for one month ago, 16,000 barrels a year ago, 28,000 barrels two years ago, and 78,000 barrels five years

ago. Holdings are near the low point which has prevailed since the price of wheat went down from the high war levels after the armistice.

Samuel Hazelhurst, aged 72, who resided at 561 Bellevue Place, and who has been a member of the Chamber of Commerce for the last 10 years, is dead at Spotswood, N. J., following an operation. For more than 30 years, Mr. Hazelhurst was a member of the Chicago Board of Trade. He is survived by his widow, a daughter and one son.

Milwaukee is starting out the new grain year in third place among the primary markets for the largest receipts of oats. The receipts of oats from August 1 up to the date of the comparison have been a little over 4,000,000 bushels as compared with more than 6,000,000 bushels for the same period at Minneapolis and more than 16,000,000 bushels at Chicago. Just a year ago, Milwaukee was in second place for oats receipts, being ahead of Minneapolis and all other primary markets, except Chicago.

Milwaukee is going to be fairly important as a wheat marketing point when compared with the light receipts of other years. The receipts of wheat for the present crop season to date exceed 2,000,000 bushels as compared with only 145,000 bushels for the same date a year ago. Milwaukee years ago was the leading wheat center of the United States, and now part of this trade will again be restored. Even with the added trade the city will be down the list among primary centers, standing six or seventh in wheat trading.

Milwaukee still reports exceedingly active grain shipments out by lakes. In a single day the shipments were no less than 1,044,000 bushels, in three vessels, establishing a new high record. The steamer W. P. Snyder also took out 407,250 bushels of corn in a single cargo, a new high record for a single shipment of grain.

The movement out by lake is also breaking all records from the standpoint of total for the season with 19,300,000 bushels shipped out this navigation year. This consisted of no less than 91 separate cargoes. This aggregate is several times as large as in any previous season. High rail freight rates and the unprecedented sale of grain have had much to do with the popularity of lake shipments, according to leading Milwaukee grain men.

Despite the record breaking arrivals of grain at Milwaukee from the West, the stocks of grain in the city are scarcely as large as might be expected under these conditions. At the opening of the month of September the storage was about 264,000 bushels of wheat, 533,000 bushels of corn, 1,449,000 bushels of oats, 301,000 bushels of barley and 72,000 bushels of rye, approximately.

A recent complication of export figures of Milwaukee grain this season shows that corn supplied about half of the shipments wheat was a close second and oats ran third in importance. This table also indicates that Canada is getting about 60 per cent of the grain shipped out and the remaining 40 per cent goes almost entirely to Buffalo.

Grain shipments by lake are now about six times as large as they were a year ago and with the general rush of grain eastward, it is estimated that the shipments by the end of the season will be at least 10 times as large as those of 1920 for the entire season.

The Ladish Milling Company had a fire recently which threatened their elevator with 800,000 bushels of grain. Fortunately, the damage was very slight and the operation of the mills was not hampered. The chief inconvenience was the loss of the grain drier, this being in the warehouse where the fire started.

The Atlas Flour Mills which had been closed for several months also suffered a slight fire but this delayed only a little the re-opening of the mills. The plant is now running at capacity.

The American Malt & Grain Company's plant at Watertown, Wis. has been taken over by Henry L. Goemann. The plant has 700,000 bushels capacity per annum. The elevator will be rebuilt replacing the one destroyed by fire and the plant will be used for general grain handling.

E. F. Morris, for several years in charge of the Armour Grain Company's feed department at Chicago, has come back to Milwaukee to manage the feed department of the Smith Milling Company.

The Chamber of Commerce was successful in its opposition to the plan to take the veterans of the Civil War away from the Milwaukee National Soldiers' Home. Letters of protest were sent to the officials at Washington and Senator Lenroot asking that the order be halted. The Chamber of Commerce pointed out that the home was built largely with money furnished by grain men, a great bazaar being held to raise funds. The site was also donated

largely by an old Milwaukee grain man, Alexander Mitchell. Since the home was built largely by donation and specifically for Civil War veterans, it was argued that the old soldiers should not be disturbed to make a hospital for World War men.

The Milwaukee Chamber of Commerce issued a statement in protest against some of the provisions of the Capper-Tincher Bill which has been passed by Congress. The charge is made that this is class legislation, pure and simple. The most objectionable feature of the bill, the statement says, is that it forces the exchanges to admit representatives of co-operative organizations without requiring them to live up to the rules of the exchange. The only qualification required, it is said, is "adequate financial responsibility."

The statement adds further that the exchanges inquire very closely into the moral and business character of prospective members, but that such a rule would be null and void in the face of the Capper-Tincher law. It is also charged that the farmers' selling agencies, when admitted to membership, can rebate commissions to country shippers, a principle which is in direct opposition to the uniform commission rule of the exchanges, which it is declared is a fundamental rule which places all the shippers, large and small, on the same footing and thus prevents the concentration of the business in the hands of the large concerns. This is declared unfair competition, allowing certain members of the grain boards special privileges.

The Chamber of Commerce has no objection to co-operative organizations as members of the exchange, in fact such members are welcomed. But it is argued that such concerns should be required to conform to all rules, just as the other members. The Milwaukee Chamber of Commerce has one such co-operative member—The Farmers' Elevator Commission Company. The local Chamber welcomes more such members but only on a basis of equality with members of older standing.

R. H. MacMasters has been elected to membership in the Chamber of Commerce.

Prof. R. A. Moore, the great seed specialist and originator of new seed strains at the University of Wisconsin experiment station, is giving high praise to the new barley standards at the Milwaukee market. He praises especially the fact that the standards have been put higher. Prof. Moore promises to do all that he can to raise the standard of barley in this state, so that it can reach the higher grades established. He asserts, however, that it is hard to improve the grain so long as the abominable system of threshing out of the shock is in effect. He claims further that farmers, because of the lack of help, often thresh immediately from the field, even immediately after a rain, and thus prevent the grain from having its natural sweat which he believes is highly necessary for the production of first class grain.

John Buerger, 77 years old, one of the old veterans of the Chamber of Commerce, has retired from the active field and says he is taking his first "vacation" in 55 years. He has been a member of the Chamber of Commerce for about 35 years. Mr. Buerger still likes to make a visit to the exchange and passes the time of day and talks "market" with his old cronies. His chief hobby now, however, is to help the Chamber to get a new building. Mr. Buerger's business was under the name of the Buerger Commission Company which now passes into the hands of the son, Bert Buerger.

One of the unique institutions of Milwaukee just organized is that of the Malt Products Exchange, which will naturally be closely allied with the grain trade of the city. The initiation fee has been fixed at \$10 and dues of \$1 a month have been stipulated. A special committee has been named to design an organization insignia which can be used for a trademark. The malt dealers elected the following officers: President, A. P. Dieman; vice president, H. F. Drummond; secretary, Jerry W. Mason; treasurer, C. H. Pfeiffer. A committee on membership is composed of H. H. Wallace, chairman, C. H. Pfeiffer, Paul Thomas, R. J. Ewald, and E. E. Emerson. A committee on by-laws consists of A. P. Dieman, chairman, C. H. Pfeiffer, H. F. Drummond, R. J. Ewald and Paul Thomas. One of the first moves of this new malt exchange is to ask Senators Lenroot and La Follette to work in Congress for the permission of home brew for private consumption.

In all probability Milwaukee will go ahead with its vast harbor program. A fight has been on with the Illinois Steel Company for years to get certain land held by that company on Jones Island which is deemed vital for the new harbor. The United States Government was holding back \$4,000,000 to be spent on a break water, conditional on the acquisition of the south end of the island. Milwaukee was urged by engineers to get plans for shipping facilities ready now so that they will be prepared when the deep waterway is completed. Unless the outer harbor in Milwaukee, is built there will be no room for

ocean vessels, experts declare because the big vessels cannot come up the narrow river channels largely obstructed by bridges.

Enthusiasm for the St. Lawrence Deep Waterway is at the high point in Milwaukee. E. T. Meredith, former Secretary of Agriculture, has sent a statement on the waterway to Milwaukee in which he says that the farmers pay all the freights. He asserts that the farmer always gets the grain price at Minneapolis or Liverpool with the freight taken out. The point is also made that with this saving of 5 to 10 cents a bushel in the export rate on wheat, the farmer will have more money to buy the manufactured products of the city, so that the entire country will benefit by the new waterway, he maintains.

Nothing can stand in the way of a huge corn yield in Wisconsin, according to the state crop reporting service. The crop is maturing very fast and it is practically certain that no great damage can be done now even by an early frost. Fall farm work in Wisconsin is progressing favorably with abundant rains, threshing largely completed and plowing and other preparation for fall grains, well under way. The yield of the spring grains in this state was rather disappointing.



WHILE the fall movement of wheat, particularly of Durum, was on a fairly liberal scale on the Duluth market during August, it started in with a rush right after Labor Day. Receipts on Tuesday following Labor Day set a new high record for this market, there being 2,041 cars of all grains on track and cash handlers worked up until midnight that night clearing trades. The exceptionally heavy run of grain that has set in to this market recently is attributed by commission men largely to the rail rates averaging up so high that grain that formerly moved eastward all-rail from Minneapolis, is being diverted to the terminals here for lake shipment. The readjustment of freight rates from Omaha territory, placing Duluth on a parity with Chicago, is also proving a factor to the movement of coarse grains and winter wheat. Operators at Duluth are sanguine that the movement will continue up until the close of the lake navigation season as farmers in Minnesota, North Dakota and Montana are showing a disposition to dispose of their grain at the price level that has prevailed lately.

The run of rye to this market has been on a large scale so far this season and a large tonnage has been bought to arrive, going to show that some interests are wanting it badly. Eastern exporters have been good bidders for rye here at intervals and on the basis of the recent movement it is thought supplies that growers are willing to let go of will be fairly well cleaned up within the next six weeks.

New wheat marketed here so far this season has been of good average quality running high in gluten though much of it was of lightweight showing the effects of the midsummer drought and hot weather conditions. Officials of the state and Federal inspection boards here asserted that the deterioration is nowhere nearly as great as might have been expected, and that Durum came through in much better shape than Spring wheat. Duluth specialists in Durum have been receiving good inquiry for it from eastern millers and export trade is expected in volume in due course. Predictions are being made that an increased proportion of Durum will be seeded this fall in the dry areas of North Dakota, Minnesota and Montana.

John D. Shanahan, of the Niagara Falls Milling Company, when on a recent visit to this market, expressed the opinion that eastern mills will buy wheat heavily this fall for shipment from the elevators here before the close of navigation. He pointed out that milling concerns down there will have to look this way for supplies to take the place of Canadian grain that had been taken by them during the years it was on the free list. He assumed that the present 35-cent customs tariff would place an effective bar against wheat imports except in special cases.

Elevator interests at Duluth are looking forward to storage space being taken up within a few weeks after the close of navigation. Their advisers lead them to assume that the old congestion will develop at Buffalo this fall, and that with Canadian grain also being rushed out to the seaboard, a serious handling situation will arise. Inquiries are being made already here regarding the probable boat tonnage that will be available to take cargoes for winter storage in this harbor. The situation is further complicated by the probability that many lake freighters

in the iron ore trade will go out of commission early in October on account of the scarcity of business in that line, through depression in the steel industry. Vessel agents are therefore much in the dark regarding the number of boats that will be left for the lake grain traffic. The rate is now firm at 2 cents a bushel from the Head of the Lakes to Buffalo. Some business has been done for late September loading at 2½ cents and a few charters have been reported for boats to load during the first half of October at 2½ cents. In some quarters it is thought that fancy rates may be made for space for the last half of October and November shipment.

James Barry, manager of Jackson Bros. & Co.'s Duluth office, recently made a visit of inspection to the elevators at Port William and Port Arthur, and on his return he predicted that congestion in handling facilities will develop early in the game up there this fall. He found strings of loaded cars on their terminal tracks waiting to be unloaded, and elevator operators complained of their being hampered through large quantities of wheat being held in store by farmers, that too in spite of the pressure being made upon growers by bankers and merchants for the payment of outstanding indebtedness.

R. M. White, president of the White Grain Company, expressed satisfaction over the results of the last annual convention of the National Hay Association at Chicago. He regards the decision to reduce the number of hay grades reached at the convention as a step in the right direction, as calculated to eliminate disputes and uncertainties regarding grading in trades made between the markets. "I hope that my successor in the presidency of the association, W. I. Biles of Saginaw, Mich., will find his relations with his executives and members as pleasant as I did during my term of office," he said. Mr. White motored down from Duluth to Chicago to attend the convention.

O. E. Harris, who is associated with Bartlett Frazier Company, and J. M. Owen, cash grain buyer for the G. P. Harbison Commission Company, have been elected members of the Duluth Board of Trade. The membership of G. H. Walker has been transferred to John McLeod of Minneapolis, and R. M. Sellwood has taken over the membership of G. G. Sullivan.

McCarthy Bros. & Co., of Chicago have opened up business connections on the Duluth market. They have appointed G. P. Harbison of the Harbison Commission Company as their correspondent.

The top record in grain loading at the elevators here for the season has been set by the Canadian steamer *W. Grant Morden*. She cleared for Port McNicoll, Ont., with a mixed cargo of rye, wheat and barley. The Duluth Shipping Company is the agent for that boat here, and it is understood that she has been chartered for other trips from this point for September and October loading.

James D. Keough, president of the St. Paul Hay Board, was a recent visitor on this market. He expressed the opinion that the season's hay crop will be ample to take care of all requirements, though it fell below the average. He predicted that higher prices would be made all along the line.

Grain stocks in Duluth elevators are increasing rapidly as a result of the heavy movement during the last three weeks. They now aggregate over 13,000,000 bushels, including all grains. Wheat stocks have mounted up to 4,100,000 bushels an increase of 1,400,000 bushels being recorded during the first week of September. The heaviest tonnage of any grain in the houses is oats, stocks of that grain amounting to 5,700,000 bushels. Sales of oats were reported to have been made here to exporters recently, and it is expected that a substantial proportion of the stocks will be shipped out before the close of the navigation season.

During the present crop year from August 1 to September 9, receipts of all grains on this market aggregated 18,112,000 bushels, compared with only 5,044,000 bushels up to the same period last year. Wheat receipts aggregated 10,621,000 bushels, against 2,838,000 bushels last year; corn 313,000 bushels against nothing last year; oats 956,000 bushels, against 49,558 bushels last year; barley 1,855,000 bushels, against 385,246 bushels last year; rye 4,024,000 bushels, against 1,468,000 bushels last year, and flax 344,000 bushels, against 504,000 bushels last year.

Duluth grain commission houses were plainly thrown up in the air over the recent order of the Minnesota State Railroad and Warehouse Commission, requiring grain houses on the Duluth, Minneapolis and St. Paul markets to report separately to an officer to be delegated to each exchange, every purchase or sale of wheat and other grains made by them. It is contended by operators here that the carrying out of that order would entail the employ-

ment of considerable extra clerical help by each house, and that its enforcement would have the effect of greatly slowing down the daily business put through during the busy season. Members of the Board here consider it unfair, to say the least of it, that the grain trade should be especially singled out for the imposition of penalizing legislation. Vigorous protests will be entered by the Duluth Board of Trade, in conjunction with the Minneapolis Chamber of Commerce and the St. Paul Grain Exchange against the order being placed in effect at the time designated, namely October 1.

MINNEAPOLIS

H. A. PAUL

CORRESPONDENT

AN ORDER requiring the Minnesota Chamber of Commerce, the St. Paul Grain Exchange and the Duluth Board of Trade to "open their books" has been issued by the State Railroad and Warehouse Commission. The grain markets under the terms of the order which will become effective October 1, will be required to report separately each purchase and sale of wheat or other grain so that the board can ascertain what transactions are legitimate hedging sales, and which are illegitimate dealing forbidden by the recent Minnesota law. B. F. Benson, president of the Minneapolis Chamber of Commerce said that his organization would comply with all laws of the state, as it understood them. Possibilities of court action being instituted are scouted by members of the Commission.

The Farmers & Merchants State Bank of Marietta, Minn., has been taken over by the State Superintendent of Banks and was closed August 27. Depleted reserves was given as the reason for the closing. The bank had a capital of \$30,000 and a surplus of \$10,000.

There are 107,824 automobiles owned on 101,847 of the 178,478 farms in Minnesota, according to a Federal census bulletin issued recently. Over 50 per cent of the farms of the state have automobiles, and in addition 3,677 farms have motor trucks, and 14,794 have tractors, giving Minnesota rank of fifth among states. Minnesota stands high in farm telephone equipment with 110,568 or 62 per cent of the farms linked in the telephone systems. Water is piped into houses on 11,392 farms in the state, while 13,539 farms are supplied with gas or electric light.

The United States Grain Growers, Inc., may open an office in Minneapolis soon and be under way with a complete commission firm's sale organization within two months, J. M. Anderson, director, announced. He states that nearly 4,000 farmers have signed contracts assuring the marketing of their grain through the new co-operative selling agency. Thirty organizers have been at work since July 1. The local organization expects to handle about 25,000,000 bushels of grain, as the farmers signed up represent about 100 elevators which, in addition to the 82 elevators the Equity Co-operative Exchange owns and the 80 it controls through financing, will bring about that amount of grain under its control.

As the national organization has no funds now, the present plan is for the Equity to handle the grain and divide the commissions with it. When the Farmers Finance Corporation of the U. S. Grain Growers has the money it plans to have, there is a possibility that the Equity may merge with it, according to Mr. Anderson. A new state law provides that boards of trade must admit co-operative selling agencies to membership, but as yet no move has been made by the United States Grain Growers, Inc., to buy a seat on the Minneapolis Chamber of Commerce, although it intends to.

Carl Gaumnitz of St. Paul has been selected to take charge of the famous Oakdale farms formerly operated by "Cy" Thompson near Austin, Minn. These farms figured in the recent financial difficulties of the George A. Hormel Packing Company. Mr. Gaumnitz is an expert farm manager, who at one time had charge of the big farm in North Dakota owned by D. S. B. Johnstone of St. Paul.

The Monarch Elevator Company, a subsidiary of F. H. Peavey & Co., recently announced the purchase of 55 country elevators of the Northwestern Elevator Company, through its president, Frank T. Heffelfinger. The purchase will give the Monarch company ownership of 175 elevators, making it one of the largest companies of its kind in the United States.

J. M. Anderson, president of the Equity Co-operative exchange, has accepted the appointment as a member of a special committee being organized to help the Near East Relief Committee to collect grain for starving children in Armenia. Minnesota farmers have been called upon to give 90 carloads of corn and 47 of wheat as their share of 5,000,000 bushels asked of the entire United States grain belt. October 3 to

9 is the period set as Minnesota's week of giving. Other members of the committee are: L. E. Potter, president of the Minnesota Farm Bureau Federation; N. J. Holmberg, Commissioner of Agriculture; W. C. Coffey, dean of the College of Agriculture; C. G. Selvig, superintendent of the Northwest School of Agriculture of Crookston; C. M. Bendixen, Ole Sageng and J. F. Flemming.

Railroads operating out of Minneapolis have applied to the Interstate Commerce Commission for authority to make effective on short notice a reduction of 7 cents on 100 pounds in rates on domestic grain shipments from Minneapolis to New York and other eastern points. The carriers wish to make the reduction in order to meet water competition on the Great Lakes via Duluth. As soon as the 4½ cent reduction authorized September 3, on domestic grain shipments from Chicago to Atlantic Coast points, is made effective by the carriers the reduction proposed by the Minneapolis lines would amount to 2½ cents on 100 pounds.

Wilhelm Michelet of Thief River Falls, Minn., was recently appointed to be state superintendent of farm lands by State Auditor Ray P. Chase. It is a new position recently created to bring about more efficient handling of the state's land interests. Mr. Michelet's salary will be \$3,000 a year. He is a graduate of the College of Law of the University of Minnesota, class of 1903, and served as city attorney of Thief River Falls in 1906 and 1907, and as county



WILHELM MICHELET

attorney of Red Lake County in 1909 and 1910 and as judge of Probate Court of Pennington County from 1910 to 1919. Since that time he has been United States commissioner, dealing largely in land matters and is familiar with the settlement of northern Minnesota and will co-operate in his new post with the state immigration and agricultural departments.

R. G. Hamp, Duluth representative of the Frank A. Pierce Company, was a visitor in Minneapolis during the first week in September.

The Marquette Elevator company has been designated as a "regular" elevator under the rules of the Minneapolis Chamber of Commerce and is entitled to receipts deliverable on future contracts. The elevator is operated by Gregory, Jennison & Co.

Directors of the Minnesota Farm Bureau Federation unanimously adopted a resolution disapproving the proposed contract for marketing the grain of northwestern farmers, now pending between the United States Grain Growers, Inc., and the Equity Co-operative Exchange, on the ground that it only piles additional costs on the marketing of grain; the contract is one-sided and gives no benefit to the Grain Growers' organization; it endangers the success of the entire co-operative movement; it merely piles one commission charge on top of another, instead of shortening the road from producer to consumer; it permits the Equity to carry on its own business and still act as agent for a competitor.

The action of the Federation has precipitated a battle between the United States Grain Growers, Inc., and the Minnesota Farm Bureau Federation which gives promise of becoming a bitter struggle. The Equity in turn has denounced the Federation as a new, untried and dangerously led organization boast-

ing political power and largely financed by government, state and county, being used by a few designing politicians who are not entitled to be regarded as farm leaders.

LOUISVILLE

A. W. WILLIAMS - CORRESPONDENT

PROSPECTS in this section have shown great improvement within the past few weeks, improved freight rates making business better, while at present low prices grain men have more confidence and are storing more grain. St. Louis has been storing some grain in Louisville. At present prices wheat men and millers are buying and storing more freely.

Conditions in the agricultural districts are improving greatly as a result of good growing weather, and crops will be much better than had been anticipated. The corn crop will be about normal according to late reports. Hay crops are also showing up nicely. Money is not nearly as tight as it was.

Louisville millers have been operating full time since the opening of the crop year, losing very little time, and that chiefly for repairs. The Ballard & Ballard Company, reported 79,019 barrels of flour produced in August, and 67,805 barrels in July, which was a short month, due to a late start while waiting for new wheat. On September 1, the Ballard company carried over orders for 23,000 barrels of flour. On the new crop year the company has operated 96 per cent of capacity, while for the South-eastern district running time has been around 65 per cent.

Hay movement is dull, farmers being busy in the field, and not hauling much stock. River receipts have been better than rail receipts comparatively. Stocks are in fair shape and demand light. Opening of the fall racing season within a short time is expected to result in better demand, which is now increasing as a result of many horses being quartered at the two local race tracks.

Feed is in fair demand, but summer rains since the drouth in June and July, have resulted in the best summer grass of years, and dairy feeding is now light. Mills are offering freely, and jobbers have fair stocks. Due to full time production of local flour mills, mill feed is in large supply. Manufactured feeds are slow, due to high costs, and cotton seed products are too high to sell. Mill feeds are quoted at \$20 for bran, \$22 for mixed feed, \$24 for brown middlings, \$25 for gray middlings, and \$29 for hominy feed, cotton, carlots, selling, Louisville.

Cash grain prices are fairly steady, although demand is slow. Corn and oats are moving in a draggy way, and while there is some demand for seed rye, it is not especially heavy. Milling demand for corn is slow, therefore white is not carrying the usual premium.

Edinger & Co., large feed and grain as well as hay jobbers, report that business is generally quiet, but that it is between seasons, and good grass is having its effect. The country has plenty of hay, grain and straw, and is not buying. Feed is moving fairly well in mill varieties, but manufactured feed is slow.

The Kentucky Public Elevator Company, reports the best business of many months past, and against a capacity of 650,000 bushels, is carrying around 500,000 bushels on hand, including 100,000 bushels of wheat on long storage, 290,000 bushels of oats on long storage, 20,000 bushels of corn, 20,000 bushels of short storage oats, 50,000 bushels of grain in transit, and 10,000 bushels of rye. The company reports that recent freight rate adjustments have been very beneficial to Louisville, and are enabling movement through this city more freely.

H. Verhoeff & Co., who lost their grain elevator about two years ago by fire, have no plans for rebuilding, figuring it as cheaper to handle through the public elevators considering present high building costs. It is possible that the company may rebuild if conditions ever reach a normal level again.

The Ritter-Hennings Company, which lost its feed mill plant and hay, grain and feed warehouses by fire a few weeks ago, is in temporary quarters, and has been advised that the owners of the old building will not rebuild, it being planned to sell the ground.

The William P. Miller Hay & Grain Company, 310 West L. Street, Louisville, suffered a \$20,000 fire on September 4, when a large warehouse and stable and an employee's dwelling were burned, along with

the company's two trucks, wagons, one horse and a lot of harness, besides several ears of hay and straw. The loss was covered by insurance. Fifteen ears of hay and five of straw had been stored to supply the race track demand in that vicinity.

George Riedling is now operating a grain and feed warehouse at Eighteenth and Magnolia Avenue, which was originally built by Chris Miller & Sons, and which was vacated by the Kentucky Feed & Grain Company, when it built its new local elevator.

Amos Yaeger, Jr., operating one of the oldest hay and grain houses in Louisville, on August 23, filed a voluntary bankruptcy petition, listing liabilities of \$11,763.62 and assets of \$1,806.55, on which he claims exemption of \$515.50. Assets are composed of delivery equipment and stock on hand.

J. C. McDowell, formerly with the sales department of the Ballard & Ballard Company, Louisville, who for six months has been sales manager for an Evansville company, has resigned to go with J. W. King, of the Model Mill Company, Johnson City, Tenn., as vice president and sales manager, handling the output of company's mills at Johnson City, two at Bristol, and another at Knoxville, Va.

Thomas Baskett, grain dealer of Henderson, Ky., has announced on the independent ticket, for the office of sheriff of Henderson County.

Forty thousand bushels of corn were recently sold by farmers of the river bottoms around Henderson, Ky., at prices ranging from 35 to 53 cents a bushel, the grain to be delivered on river banks, and picked up by purchasers with barges. Henry O'Bryan and the Rapier Grain Company, of Owensboro, and a Nashville concern were the buyers. Growers report that they have to sell in order to provide crib room for the new crop, which promises to be very large.

CINCINNATI

HARRY A. KENNY CORRESPONDENT

CONDITIONS in the grain and hay market were of an encouraging nature the past month. Winter wheat shipments will be cleared out of the Ohio and Indiana markets within the next two months, according to all reports. Dealers anticipate a slight increase in wheat prices before the end of this month. The Government report showing a decrease of more than 50,000,000 bushels of wheat during July was a feature of the market, but the bullish influence failed to develop enough buying support to create a stronger market.

Corn is still holding firm, with receipts larger than shipments in some instances. Recent rains throughout the state have helped the crop considerably and reports are to the effect that the crop, especially in the western and southwestern part of the state, will turn out fairly well despite the drought.

The local hay situation is showing more activity than at any time since the movement of the new crop began and more confidence is being expressed by some members of the trade regarding improvement in the near future, but this cheerful attitude is claimed by others as not assuring and is used more to create a "better moral effect," than to stating actual conditions. Receipts of hay to Cincinnati's plugging trucks were liberally increased during the past month. On the whole the outlook points to a betterment in market conditions, but whether the farmer and shipper is destined to derive a fair profit for his hay is entirely up to the railroads and a readjustment of their rates.

Red and Alsike Clover seed in Ohio shows a reduction from the fairly small crop of last year.

On his return from Washington, where he and other protestants sought a suspension before the Interstate Commerce Commission on the reduction of rates on grain for export and domestic use, B. J. Drummond, executive secretary of the Cincinnati Grain and Hay Exchange, said that although the proposal as already authorized by the carriers would go into effect at the end of the month, agitation would be started toward an equalization of the differential that will exist on the two classes of shipments. As the proposal stands, Mr. Drummond explained, foreign markets will benefit at the expense of the millers in this country since the rate per hundred pounds from Central Freight Association territory to the coast on domestic shipments will be on a 4½ cent reduction basis, while grain for export receives a 7½ cent rate reduction. In an effort to seek an equalization or a flat reduction rate, Mr. Drummond held a conference with shippers and carriers and discussed the possibilities of such an adjustment. The proposed measure will wipe out approximately 200 grain markets in Indiana and Illinois, it was pointed out, by reason of the fact that with lake and rail rates lowered shipments now coming through Cincinnati will be swallowed up by Chicago. It was believed that the proposal as a whole was

intended to check the movement of grain now going through Montreal and Gulf ports, which would revitalize the eastern seaboard interests, reported to be apathetic on account of these other outlets. Local shippers felt that they were put on the defensive with western grain raisers claiming that rate reductions are essential if they hope to survive the business depression. In view of this it was not thought advisable by local interests to combat the railroads' proposal or to make further protest before the Commission.

Cincinnati traders on the New York and Chicago markets were interested to know just what effect the new Capper-Thacher law would have on grain trading on the Chicago Board. Paul Van Leunen, manager of E. W. Wagner & Co.'s Cincinnati office, received the following brief synopsis of the main features of the law in a telegram from Secretary Mauff of the Chicago Board of Trade: "The new law," Secretary Mauff said, "recognizes the legality of future trading. It provides regulation for grain exchanges under a commission composed of the Secretary of Agriculture, Secretary of Commerce and Attorney General of the United States. It provides that co-operative bodies that become members must assume the same financial responsibility as other members. Neither the tax nor the penalties of the law are to be imposed or enforced until after four months. It is unfortunate that the critics of the exchanges have spread reports that the new law is to eliminate future trading. The economic value of contracts for future delivery has been recognized in this law."

Edward A. Smith, who was for many years connected with the Fleischmann interests, as manager of the Union Grain & Hay Company, and who recently became engaged in the hay business, has completed an extensive trip through the hay shipping sections of Ohio and Michigan.

The following members of the local hay trade attended the National Hay Association convention at Chicago: Clarence Bender of A. Bender; Harry Hill of Bunting & Hill Company; Albert Hess of Gale & McMillen Company; John E. Collins Jr., of Collins & Co.; Oliver Muchmore of the Richter Grain Company; George Wirth of the DeMole Grain Company; Earl Skidmore of the Hrouse & Skidmore Company; "Jack" Gartner of D. C. Cross & Co.; William B. Riley, manager of the hay department of the McMillen Company; Edward A. Smith; Thomas Dugan; Harry Nieneyer; Charles E. Van Leunen; Charles Joerg of Dorsel & Co.; Earl Root of Whitecomb and Root; Sherman Ross of the Early & Daniel Company; Charles Hill of Ralph Gray & Co.; Ralph Brown of Henry Brown & Co.; G. C. Beutler, Frank Currus, Walter Hopkins of the Mutual Commission Company; Frank Brown of W. L. Brown & Co.; Alfred Gowing, Redmond Fitzgerald of Fitzgerald Bros. Company; W. B. Van Horn, John Kelley Elmer Helle and George Schneider of Maguire & Co. The Cincinnati members were active in the convention being represented on committees and taking part in the debates.

Henry M. Brouse, president, and B. J. Drummond, executive secretary of the Cincinnati Grain and Hay Exchange, addressed the Chamber of Commerce at Newport News, Va. last month at its monthly meeting and dinner. The trip was made on invitation of the Chamber of Commerce which seeks closer relations with shipments of grain through that port. It is expected that the cut in rates will bring considerable grain to Newport News for export.

Thomas Dugan, associated with various local grain firms for the past 20 years has decided to embark in the grain and hay business under the firm name of Thomas Dugan Grain Company with offices in the Rawson Building. Mr. Dugan has a thorough knowledge of every detail involved in the grain elevator and hay business, besides a large acquaintance in the trade here and elsewhere.

John De Molet of the De Molet Grain Company and Mrs. De Molet have returned from a two weeks' sojourn in the East. During Mr. Molet's absence the business was looked after by George Wirth, his able assistant.

Local grain dealers and brokerage houses with Chicago Board of Trade connections are watching what effect the failure of the attempt in Canada to pool grain will leave there and are speculating as to what effect it will have in this country as well. Pooling advocates in this country, it is reported, were greatly disappointed at the Canadian failure, while American farmers are being urged to tie up billions of dollars worth of grain on a five-year contract which, according to Cincinnati grain traders, is more rigid than the one rejected by Canadian farmers. It was reported that Canadian farmers for this year at least will market their grain through the regular channels.

The McQuillan Company, Inc., which has an office in the Duttenhofer Building, is not a new concern as was announced unintentionally in the August 15 issue. This firm is incorporated and has been in busi-

ness in this city for the past 40 years. William B. Riley, whose name was mentioned in the story last month, is manager of the hay department of the McQuillan Company. William R. McQuillan is president of the company.

ST. LOUIS

S. F. LARRIMORE CORRESPONDENT

THE Mexican Consul in St. Louis announces that the duties imposed by the Mexican Government on the importation of American wheat will be lifted October 1, until January. A short wheat crop in Mexico has caused the Mexican Government to lift the duties in order to provide bread for the Mexican people. The duty on wheat was raised about three months ago to the point where American grain was practically short cut.

Edward M. Fiesch of St. Louis, who, when the United States entered the war, was placed in charge of the St. Louis office of the Food Administration and later was sent to Europe to assist Herbert Hoover in war relief work and then for several years was treasurer of the United States Grain Corporation, has been appointed by Secretary Hoover a member of the American Relief Administration for the relief of Russian famine conditions, with headquarters in New York.

The Interstate Commerce Commission has approved application of the Gulf lines to reduce rates on grain and products 5½ cents per 100 pounds from Missouri River, St. Louis, Cairo and country points. Date effective is to be announced later.

Shipments by large line from St. Louis for the month of August, 1921, were as follows: Flour, 12,810 barrels, wheat, 749,150 bushels; corn, 78,535 bushels, oats 1,560 bushels.

St. Louis feed men report a considerably better demand for bran and middlings the past week.

A new record has been established by the Mississippi barge line for August with 54,000 tons carried which included 750,000 bushels of wheat.

The following notice was recently posted on the bulletin board of the St. Louis Merchants' Exchange: "Brent barge line, will publish export rates for grain from St. Louis to New Orleans 14.4 cents effective September 3. Missouri Pacific gives notice it will publish reduction 5½ cents grain and grain products exported from St. Louis to New Orleans effective as soon as permission on short notice can be secured from Interstate Commerce Commission. M. & O. and Illinois Central will do the same. (Signed) Chas. Pippin."

The reduction of 5½ cents on export rates on grain products from St. Louis and Missouri River to Gulf points become effective Sept. 12.

The following notice was posted on the bulletin board of the St. Louis Merchants' Exchange recently: "Effective September 28, domestic rates on grain and products from St. Louis, Peoria and Chicago to eastern trainline points will be reduced 4½ cents per 100 lbs. This will apply to points on and east of the Buffalo-Pittsburgh line, and will not apply to C. F. A. territory."

President Nat. L. Moffitt, of the Merchants' Exchange, has just returned from a month's stay at Blowey Rock, N. C.

W. K. Stanard, of the Stanard-Tilton Milling Company, St. Louis, has just returned from a month's vacation in Canada.

John E. Hall, the champion globe-trotter of the St. Louis Merchants' Exchange, is again back on the floor after six months spent in Australia. He is surrounded daily by interested groups and never tires of telling of the many curiosities seen on the trips.

B. F. Jostis, formerly of the Hunter Grain Company, and M. B. Lusk of Lusk Bros., have organized the Jostis-Lusk Grain Company, with offices at 453 Pierce Building, St. Louis.

Hugh Wright, of the Hugh Wright Company, Inc., has made application for membership in the Merchants' Exchange.

The following were visitors on the floor of the St. Louis Merchants' Exchange recently: F. J. Miller, Farmers Elevator & Grain Company, Raymond Ind.; Nicolas Hernandez, Porto Rico; E. A. Evans, E. A. Evans Grain & Seed Company, Grand River, Iowa; M. S. Katz, American Milling & Feed Company, Montgomery, Ala.; Harry Williams, Nashville, Tenn.; S. M. Allen, Allen & Scales Grain Company, Nash-

ville, Tenn.; E. Nathan, Nathan & Pettus Grain Company, New Orleans; C. B. Fox, C. B. Fox & Company, New Orleans, La.; and A. R. Aylsworth, Federal Grain Company, Kansas City.

INDIANAPOLIS

EARL BULLOCK - CORRESPONDENT

INDIANAPOLIS grain dealers will turn their efforts toward obtaining revisions in freight rates on domestic shipping in the Central Territory, now that the 7½ cents reduction on export freight rates has been authorized by the Interstate Commerce Commission, according to Leonard E. Banta, traffic manager for the Indianapolis Board of Trade. The 7½ cents reduction on each 100 pounds will not result in a decline in the price of grain, in the opinion of Mr. Banta, who said that, although the bulk of the wheat crop has already been disposed of, the reduction will aid farmers in later shipments of corn and the remainder of the wheat and oats crops. The new petition to obtain reductions in domestic rates, if approved, will probably mean stimulation of domestic business and enable domestic grain buyers to compete with export buyers, Mr. Banta pointed out. He said that the export buyer has no decided advantage in freight rates that he can bid higher outright as the domestic buyer cannot meet the bids and then ship out on the present high domestic rates.

Reductions which Indianapolis men petitioned for on domestic grain freight rates have been partly granted by the Interstate Commerce Commission, but further negotiations are under way for greater reductions on rates in the truck line delivery, which includes the Middle Western States north of the Ohio River, west of the Mississippi River, south of the Great Lakes and east of the Appalachian Mountains. Mr. Banta said that grain men are hopeful that results will be shown within 30 days.

The 7½-cent reduction will reduce practically all rates in Indiana and will even spread into Ohio, according to Mr. Banta, who pointed out that the movement for decreased rates was backed by the Indianapolis and Peoria, Ill., markets, while it was opposed by southern and western railroad lines and markets.

He explained that it was an emergency relief intended to equalize as far as possible the all-rail rates and the rail and lake rates between the central west and eastern ports, and one result will be that Indianapolis may compete with Chicago as a shipping point to the East. The reduction will also equalize eastern shipping rates and gulf shipping rates, thereby diverting part of middle west grain to eastern points, instead of to New Orleans.

Arthur J. Stineman, former Terre Haute manager of the Valler-Spicer Milling Company, has bought the feed business of C. F. Carter, at 1923 South Sixteenth. Mr. Carter has owned the business for 14 years and is now going to retire. H. F. Riggs, of Bloomington, Ind., will be the new manager of the milling company. He has taken charge.

The Steuben Grain Company has been organized at Pleasant Lake, Ind., for the purpose of operating a grain elevator there. The company has a capital stock of \$50,000; and the organizers are Glen Golden, Roscoe Conklin, F. G. Robertson, Clair Gettings and Fred Weiss.

The property of the Hartford City Grain & Milling Company at Hartford City, consisting of two elevators and a flour mill, has been sold by Clifford Fisher, C. S. Pierce and C. L. Northlane of Union City, to Edwin C. Wright of Greenville, Ohio. Improvements will be made by Mr. Wright.

Clyde A. McCordle, 41 years old, member of the firm of McCordle-Black Company, grain dealers here, died recently in Detroit following an illness of several months. The body was brought to Indianapolis, where he had lived for more than 20 years, for burial. Mr. McCordle was a son of John W. McCordle, chairman of the Indiana Public Service Commission. He had been a member of McCordle-Black Company for about 20 years. Mr. McCordle was born in Fountain County, Indiana, and was educated in the public schools of Fountain and Montgomery Counties. He afterward attended Wabash College and Indiana University. Mr. McCordle is survived by his widow, two children, and his parents, Mr. and Mrs. John W. McCordle.

A creditors' petition in bankruptcy was filed in the Federal Court last week against the Farmers Union Elevator Company, of Carlisle, Ind., by Sathiel Boone, Rush E. Brentlinger, George W. Kennedy and William R. Colvin, all of Carlisle. The creditors say their claims amount to \$30,280.50 in excess of securities held by them. The elevator company, it is asserted in the petition, committed an act of bankruptcy when the Board of Directors admitted by

resolution their willingness to have the company adjudged a bankrupt. The individual claims of the creditors, arising, it is said, through their acting as sureties for the company are as follows: Mr. Boone, \$16,904.72; Mr. Brentlinger and Mr. Kennedy, \$2,651.57, and Mr. Colvin, \$3,064.

The Crete Elevator Company has just been organized at Crete, Ind., with a capital stock of \$25,000. Organizers of the company are J. C. Bunch, J. B. Jordan, Fred Elliott, Norman Anderson, A. J. Murray, E. T. Longfellow and U. C. Wise.

Fire, which is thought to have originated in the engine room, destroyed the grain elevator of the Woodbury-Elliott Company, in the village of Progress, southeast of Muncie, recently, with all its contents, causing a loss estimated at \$40,000. The elevator was filled with wheat and oats. It is believed the insurance will cover the loss. The grain was the property of the Woodbury-Elliott Company, of which Edward F. Elliott is manager. Farmers living in the vicinity fought the flames by means of a bucket brigade. Muncie firemen went to the scene but were handicapped by lack of water. The grain destroyed included 15,000 bushels of wheat, nearly as much oats and several thousand bushels of stock feed. A few sacks of grain were carried from the burning building by farmers. The records and other books of the company were saved by Ward Clevenger, a farmer, who discovered the fire and broke into the office.

TOLEDO

C. O. BARNHOUSE - CORRESPONDENT

THIS receipts of grain at this point have decreased very materially during the month just past. Stocks of wheat and oats are large, although they both show a decrease when compared with a week ago. They are as follows: Wheat 988,000 bushels, corn 41,000, oats 1,213,000 and rye 84,700. A week ago they were: Wheat 1,100,000, corn 39,000, oats 1,234,000 and rye 138,000. The flour production for the last month was 156,000 barrels, a month ago 100,000, same month year ago 95,000. The public elevators are about full of grain, a condition that has not prevailed for some time.

The farmers picnic at Deshler has passed into history, having been held on Labor Day. The baseball game between the managers and members of the Toledo Produce Exchange was won by the latter in a score of 10 to 1. The managers are not as good at playing ball as they are at marketing grain. Of course Bill Cummings was umpire and aside from a few raw decisions, he got along very well.

The debate on the question: "Resolved, That the grain marketing plan of the U. S. Grain Growers, Inc., will be more beneficial to the producer than the present plan of the Chicago Board of Trade," which was staged with Chas. Latchaw, of Defiance, and Harry Robinson, of Cleveland on the affirmative side and H. O. Barnhouse, of Toledo on the negative was listened to with close attention by all those present. The affirmative side was presented in a rather general manner by the debaters on that side, who devoted a great deal of their time to sarcastic criticism of the Board of Trade, while the speaker on the negative side of the question gave a very constructive talk touching upon the merits of the present system in detail and pointing out the defects in the new plan. There were no judges to decide upon the merits of the discussion, and in the minds of the audience the honors were about equally divided. The attendance was not as large as expected, many of the farmers being kept away by work in corn and alfalfa fields, and others attended attractions at nearby points. The educational feature of the debate will not be lost, however. A score or more were in attendance from the Toledo Produce Exchange.

Harry Devore, of H. W. Devore & Co., and Robert S. Burge, of the S. W. Flower Company, have just returned from several weeks vacation at Long Lake, near Alpena, Mich.

K. D. Kellholtz and John W. Luxcombe and their families returned recently from a short vacation at Mittewanda Beach, Ohio.

L. A. Mennel has returned from a short business trip to New England points, and is spending a few days with his family at Sault Ste. Marie, Mich.

Miss Esther Peters, of H. W. Devore & Co.'s office, has returned to work after several weeks' illness.

Toledo grain dealers and elevator men believe that the recent reduction in domestic grain rates to eastern points of 4½ cents cwt. will prove to be quite a stimulus to the movement of grain through this gateway. This decrease was made effective in order

to equalize the domestic and export rates on grain and its products. It will be in force on and after September 28.

Ormond Paddock, accompanied by his wife, left recently for a motor trip to New York and New England points and will be away about three weeks.

Recent visitors to the Toledo Produce Exchange were: O. E. Richardson, of Celina; Peter Steiner, of Pandora; L. J. Ducatt, of Bowling Green; A. A. Cunningham, of Tiffin and Lewis Sloan, of Greilton.

Mr. and Mrs. Adam Krohn, of Custer, entertained the members of the Toledo delegation to the Deshler picnic, on their return trip Monday evening with light refreshments, which were thoroughly enjoyed by the boys.

NEW YORK

C. K. TRAFTON - CORRESPONDENT

CARL HANSEN, active in the New York market as a barley and malt specialist, recently returned home with his wife after an absence of three months, two-and-a-half months of which were spent in Germany. He stated that he found conditions in that country much better than he had anticipated. Business in nearly all lines had been reviving at an unexpectedly rapid rate, brought about by the fact that the people were determined to get back on their feet and in order to do so practically everyone was working industriously and faithfully for long hours and generally at low wages. Mr. Hansen also stated that visitors from America having solid American money to spend received a hearty welcome and generally respectful treatment. He stated that he was much surprised to find prices there uncommonly low. Mr. Hansen was especially pleased with his experience in Baden-Baden where he stopped with his wife at one of the leading hotels. They occupied one of the best suites and were agreeably surprised by the low charge, only \$3.50 per day for the two, including meals and all incidentals.

Robert B. Gentles, New York manager for Lewis, Proctor & Co., grain exporters and importers, returned to his post on the Produce Exchange after being away about six weeks traveling in Europe. Mr. Gentles stated that in Great Britain the corner had been turned, people getting back on their feet and working more faithfully, and therefore labor troubles were gradually disappearing and business was slowly recuperating.

Wm. H. Clark, well known hay and grain dealer in this market, and chairman of the Hay Committee of the New York Produce Exchange, was back on 'Change early in September after attending conventions in Syracuse, Chicago, and Detroit. Mr. Clark stated that he found there was a fair quantity of old hay back in the country, but the available supply of new is meager as the production was reduced to only 60 or 70 per cent of a crop owing to the drouth and intense heat in July. Hence farmers were not selling, partly owing to high freight rates. In some cases the high rates put a stop to shipments as practically all of the profit in the hay was consumed by the freight charges. Another result he discovered was that the wheat trade was being largely localized, farmers and country elevator men selling to local millers rather than ship long distances at the prevailing high rates.

William Riemschneider, an old member of the local grain trade, after a pleasure trip of three months with his wife, traveling mainly in Holland and Germany, returned recently to the Produce Exchange. He found gradual improvement in conditions, particularly in Germany, as people were working more faithfully and for long hours.

C. Clausen, associated with grain firms on the New York Produce Exchange for several years, latterly as secretary of the Picard Grain & Produce Company, has severed that connection. In the future he will act as representative on the Exchange floor for F. C. Luthi & Co., Inc., export and import merchants of this city, being manager of their grain department.

Members of the New York hay and grain trade were surprised recently to hear that the firm of D. Jewell & Sons, one of the oldest and most respected in the trade, had gone out of business, having sold to the W. K. Voorhees Grain Company of which Frank S. Voorhees is president. The Jewell concern was started over 50 years ago in East New York, now Brooklyn, and for more than 30 years has been conducted by John V. Jewell. The latter has retired from the business, partly because he was actively engaged in financial matters, particularly as vice-president of the Williamsburgh Savings Bank, one

of the largest savings institutions in the country. It is an interesting fact that the venerable W. K. Voorhees, father of Frank S. Voorhees, was in 1856 a member of the firm of Jewell & Voorhees.

Ernest Reiner, general manager of the Chesapeake Export Company, a New York subsidiary of the J. Rosenbaum Grain Company of Chicago, recently returned to the Produce Exchange after an absence of five and a half months. This period he spent with Mrs. Reiner traveling all over Europe with the exception of Russia and Poland. He says that Europe will need all of the wheat that she can pay for. Owing to the drouth, forage crops were exceedingly poor, and hence large quantities of feedingstuffs will have to be imported. Consequently he looks for a larger business in coarse grains. He noticed a gradual, though slow improvement in economic and industrial conditions practically everywhere, but especially in Germany where the people generally were determined to get back to the normal as soon as possible, and therefore were working with the greatest vigor for long hours.

A novel development in the New York hay trade was the arrival recently of more than 200 tons of choice Alfalfa from California via the Panama Canal. All or practically all of this hay was delivered to Brooklyn terminals and found a ready sale at \$31 to \$32 per ton. The quality was said to be excellent. It was asserted that a large part of this hay will be cut up and used for mixing purposes.

Siebel C. Harris of McCarthy Bros. Co., grain commission merchants on the Chicago Board of Trade, has been elected to membership in the New York Produce Exchange.

Charles W. Chilcote, who recently severed his connection with the local office of E. F. Leland & Co., commission merchants of Chicago and New York, to become a representative on the Produce Exchange floor for the J. Rosenbaum Grain Company of Chicago, has been elected to membership in the Exchange.

L. Ettlinger of the Chesapeake Export Company, a New York subsidiary of the J. Rosenbaum Grain Co., F. E. Andrews, representative on the New York Produce Exchange for J. E. Bennett & Co., of Chicago, J. C. Friedrich of the Nye-Jenks Grain Company, Charles La Due, hay and grain dealer, and J. D. Sugarman & Co., brokers, have also been elected to membership in the Produce Exchange.

Applications for membership in the New York Produce Exchange have been received from P. J. McCulloch of Fearon, Brown & Co., import and export merchants, and from Francesco Quattrone, export agent for the Italian Government Commission.

The death was announced on the New York Produce Exchange late in August of G. K. Clark Jr., who always retained the "Junior," although he was over 80 years of age, and was one of the oldest members of the Exchange. Mr. Clark, while well-known to practically all of the oldest members, was not known by the younger element as he had not been in active business for a number of years. Several years ago when there was a trading pit on the Produce Exchange he was one of the leading operators, often trading in more than a million bushels a day, and at the same time also sending large orders to the Chicago Board of Trade where he was known by all of the old-timers. Mr. Clark's judgment was considered sound as a rule, as demonstrated by the fact that when he retired he was a wealthy man.

Much surprise and regret was manifested by members of the New York Produce Exchange, and especially in the grain and oil seed trades, by the sudden and wholly unexpected death of Emilio Pritchard of Pritchard & Co., aged 69 years. Mr. Pritchard had been identified with the grain trade since boyhood and first became well-known as cashier for the old grain house of Hughes, Hickox & Co., which at one time was considered of great importance, particularly in the corn trade. Mr. Pritchard had been in good health until recently, his untimely passing away being attributed to uraemic poisoning.

The death was announced early in September of John Adikes, an old member of the New York Produce Exchange, long engaged in the jobbing business in grain, feed, hay, etc., at Jamaica, N. Y.

THE Grand Trunk Railroad has issued notice that effective at once permits will be needed in order to move American grain from Tiffin, on Georgian Bay, to Montreal for export. Exporters must show that they have ocean room engaged to get the grain moved. Conditions at Georgian Bay ports and at Montreal are serious for the greatest congestion exists, with the Canadian crop just beginning to move, and a large initial movement expected.

ASSOCIATIONS

MICHIGAN DEALERS MEET

The Michigan Hay & Grain Dealers Association held its annual meeting in Detroit on August 26. The meeting was well attended, an unusually large number of visitors being present who stopped on their way from the National Association meeting in Chicago.

In bidding the dealers welcome, Harry Carson told of the advantages Detroit offered, these advantages to be augmented in the near future by a new modern elevator for handling export grain. This announcement was made the subject of congratulation for Detroit in the response to the address of welcome, made by Ray Myers of Jackson.

President S. O. Downer appointed the following committees: Nominating Committee: T. J. Hubbard, Lansing; Lee Mansfield and Sam Kirby. Auditing Committee: Albert Reidel, Ash Ruttle and Tom Smith. Resolution Committee: Harry Strong, Lee Town and Mr. Goulay.

Fred M. Williams, formerly president of the New York Hay & Grain Dealers Association, gave an address, covering briefly the subjects he had discussed in his annual report as president at the recent New York convention.

SECRETARY GRAHAM'S REPORT

Secretary John C. Graham of Jackson gave the following report of the year's work:

The past year has been a very trying one in the trade, particularly because most of us had to do business on a falling market. As this was fundamental, there was no opportunity for the Association to secure relief from such conditions.

There was, however, plenty of opportunity for us to take an active interest in transportation questions, looking to a better car supply, freight rates, etc. In any number of cases your secretary's office has secured cars for shippers who had to have them to protect their contracts of sale, and in most instances we found the railroads willing to furnish the cars when the situation was explained to them.

The work of the Association with respect to freight rates and general transportation conditions has been done largely through your secretary being a member of the Executive Committee of the National Industrial Traffic League, and chairman of the Legislative Committee of the Michigan Traffic League.

At the time of the 40 per cent advance, you may recall, the public generally, including, if you please, the members of this Association, believed that the railroads should have more revenue and objected to any opposition being made to these advances in rates. At that time we were all making money and we did not consider that it would take as long to secure reductions as it did for the railroads to get advances. The Transportation Act of 1920 requires that the railroads, as a whole, shall earn 5½ to 6 per cent upon their valuations and at the last report they were earning about 1 per cent. For this reason, it is generally believed that there should be no general sweeping reductions in rates, but rather that there should be adjustments in rates where they are so high as to prevent the movement of any particular commodity. This, of course, resolves itself into a plain statement of the facts to be produced by sworn testimony to the Commission. We can not make a bare statement and get away with it. Such things have been done to the Commerce Commission. No additional movement of freight has resulted from the reductions in rates and the application for consequent reductions has done more harm than good to the general situation.

There is no doubt that relief can be granted on specific commodities, such as hay, grain, etc., if it is shown conclusively that the lack of movement to the markets is due to the high transportation costs; but proper research and evidence must be secured to show absolutely that this is a fact in order to secure the necessary relief.

As chairman of the Legislative Committee for the Michigan Traffic League, your secretary was given the credit for defeating, during the past session of the legislature, railroad legislation which would cost the railroads in Michigan upwards of \$3,000,000 annually. We plainly stated at the hearings that the farmers and commercial interests of this state would not pay the \$3,000,000 in additional freight and passenger rates; that if these bills were passed, creating this additional expense, it would have to come out of the operating costs of the carriers, as they were not then earning what the Federal Act said they were entitled to earn. The bills were defeated.

The Association has lent its moral and financial assistance to the Michigan Traffic League in its effort to secure a better adjustment of class rates in the state. We understand the fund, sufficient to start action, is about raised and it is probable the case will be brought in the near future. The Michigan Traffic League is in the same position as any other association—they have no funds of their own, only dues from the few traffic men who are members, and must depend on voluntary subscriptions to such actions as the one now before them.

This matter is one of real interest to our members north of the main line of the Michigan Central. The Association has now 155 members. If every elevator man in the state were a member, you would have an association with sufficient funds to be a real factor in state and national affairs, with a secretary who could devote his whole time to looking after your interests and in a way that you want it done. This is something that is worth consideration on the part of you all.

The next speaker was W. I. Biles of Saginaw, the new president of the National Hay Association. He spoke both from the standpoint of a local member and as a member of the larger organization, urging the members to join the National Association and attend its meetings to broaden their outlook by

seeing what big men are doing to bring things back to normal.

Warren H. Dean, president of the New York Hay & Grain Association, brought the greetings of that organization and urged the co-operation of the two associations as their interests were identical. He said the New York body would abide by the new hay grades as established in Chicago.

Harry Northway, treasurer of the Association, reported a balance on hand of \$296.35.

T. J. Hubbard, the new secretary, in his report on crop conditions advised that this was a good year to exercise caution in buying hay, especially hay in the mow, as the grading would be difficult, owing to the fact that some part of the Michigan crop, while good feeding hay, had burnt heads, due to rains and intense heat immediately following. Mr. Hubbard also advised cutting down the large advances on purchases.

J. Vining Taylor, secretary of the National Association, read the new hay grades and discussed the reasons that had made the changes advisable.

E. J. Sims, traffic manager of the National Hay Association, gave an outline of the results secured with the Interstate Commerce Commission in regard to the work of the National body in reconsigning charges, and other rates.

Charles Quinn, secretary of the Grain Dealers National Association, gave an outline of the vicious economic doctrines being sponsored by the U. S. Grain Growers, and the unfair terms of the contract it is using to bind farmers and shippers for five years. He told of the educational work the National Association was doing to counteract the grain growers' propaganda.

ELECTION OF OFFICERS

Adopting the report of the Nominating Committee the following officers were elected: President, Harry Northway, Owosso; first vice-president, R. S. Bishop, Almont; second vice-president, Mr. Isgriged, Traverse City; treasurer, Albert Reidel, Saginaw. Directors for two years: F. L. Young, Lansing; John Bridgeman, Jackson; secretary-treasurer, T. J. Hubbard, Lansing.

Upon motion by W. A. Cutler of Adrian the Association went on record as favoring the new National hay grades.

Fred M. Williams and Wayne Dinsmore gave brief addresses on the Horse Association of America and its accomplishments in promoting a more general use of horses.

RESOLUTIONS

Harry Strong presented the report of the Resolutions Committee which was adopted. The resolutions endorsed the educational program of the Grain Dealers National Association; endorsed the attempt to get lower rates on hay and grain; condemned the work of Farm Bureau agents; pledged 10 cents per car of hay per year to the Horse Association of America; thanked the officers, the Detroit hosts, and speakers for making the meeting a success.

The meeting was then adjourned and practically all in attendance went to the ball game between the Yanks and the Tigers. In the evening a moonlight sail on the Detroit River and Lake St. Claire was enjoyed by all.

MEETING OF NEW YORK DEALERS

The annual meeting of the New York State Hay & Grain Dealers Association was held at Syracuse, N. Y., on August 18, 19. President Fred M. Williams called the meeting to order, and after the formalities of opening, Joseph H. Huey of Philadelphia, Pa., gave a very comprehensive report on crop conditions throughout the country and Canada. D. J. Sims, traffic manager, gave an extemporaneous report of traffic matters in general with some remarks concerning the recent conference held at Washington, D. C., relative to freight rate reductions. From Mr. Sims' comments it was gathered that no material reductions of hay rates may be looked for in the immediate future. President Williams submitted the report of the Board of Directors in which he paid his respects in no unmistakable terms to the destructive work being done by many county agents. He also urged support of the Horse Association of America.

The afternoon session was opened by E. A. Dillenbeck, who spoke on the "Hay Business from the Receiving End." J. B. Bradley of Interlaken, read a very interesting paper covering "The Grain Business as Viewed by the Buyer and Shipper." Warren H. Dean of Auburn, spoke on "The Hay Business from a Shippers Standpoint" and incidentally warned those present the future of the hay business entirely depended on the attitude of the men engaged therein. John Connelly of New York pre-

sented "The Grain Trade from the Viewpoint of the Receiver and Distributor." Wayne Dinsmore, secretary of the Horse Association of America, of Chicago, Ill., gave an extemporaneous talk on the work of the organization, incidentally showing by figures that every man interested in hay or grain production and distribution should show an active interest in promulgating the facts of the economic features of encouraging the breeding and use of draft horses on the farms and for motive power for short haul traffic. Chas. S. Schaefer of Brooklyn, N. Y., gave some interesting figures showing comparative costs of hauling by motor and horse drawn vehicles.

President Williams appointed the following committees: Nomination Committee: E. Springer of Moravia; B. E. Rouse, of Geneva; G. S. Haxman, Oakfield; J. S. Schultz, of Syracuse; J. H. Huey, Philadelphia, Pa.; O. N. Adams, Weedsport. Resolutions Committee: H. S. Bascom; E. A. Dillenbeck; J. L. Schultz; H. S. Hotaling and John P. O'Hara.

The Friday morning session was preceded by a conference of shippers, receivers, agricultural and railroad officials. The regular session being opened by an address by R. W. Quackenbush, agricultural agent, New York Central Railroad, who spoke on "The Co-operation of the Shipper, Receiver and Carrier in the matter of inspection, loading and unloading of equipment." Wm. T. White, director of Bureau of Weights and Measures, of the Department of Foods and Markets, followed with an outline of what this department is doing to insure the correct weighing and tagging of hay and straw.

C. A. Coleman, chairman of the Grade and Rules Committee, submitted some changes in grades and rules which were discussed and referred to the Board of Directors for further action.

The report of Secretary-Treasurer D. Clifford Jones was followed by those reports of the various

committees who have served during the past year, and was closed by the report of the Nomination Committee who presented for president, Warren H. Dean, Auburn; for vice-president, W. A. Van Dene, Port Ewen; directors for two years, Fred M. Williams, New York City; B. E. Rouse, Geneva. The election and installation of the new officers followed, and after some general round table talk President Dean announced the meeting adjourned subject to the call of the chair.

On Thursday evening an enjoyable banquet was held at which a number of speakers and entertainers provided a delightful evening.

A STRONG APPEAL

Secretary Taylor of the National Hay Association has just issued the following earnest appeal:

"If I ever appealed to you in earnest before, I am doing so now. Business, as you know, in our particular commodity has been anything but good. The reason: Exorbitant freight rates! Your officers and traffic manager have put more time on this than you know.

"Mr. Sims has arranged for a hearing before the General Committee of the Central Freight Association, Freight Traffic Committee, Transportation Building, Chicago, September 29. We must go before this Committee not with two or three men but with 50 or 100, or more, and furnish specific data to show just how the high rates have affected our business this season as compared with previous seasons. It will cost you a few dollars to attend this meeting—that is true—but gentlemen, please forget that part of it. Lay aside everything and meet Mr. Sims, President Biles and myself, Sherman Hotel, not later than noon, September 28, so we can have a preliminary conference before going to the railroads on the 29th. We cannot win this fight without your co-operation, but we are willing to go the limit if you are."

to some extent increase railroad tonnage and the revenues of the railroads. The repeal of this tax should have salutary effects upon business conditions in general. The removal of the tax on transportation (including freight, passenger, and express) reduces the revenue collections \$262,000,000, a sum amounting to more than \$2 per capita per annum."

AN APPEAL FOR LOWER SORGHUM RATES

In an effort to bring about a reduction of the freight rates on Kafir corn, Milo Maize and Feterita, all of which are sorghum grains, Hamlin Palmer, traffic manager of the Panhandle-Plains Chamber of Commerce, has written a letter to the Interstate Chamber of Commerce, calling attention to the enormous yield of these crops in this part of Texas this season, and the necessity of getting the grain to market. He said:

"In the Panhandle of Texas there is a crop of Kafir corn, Milo Maize and Feterita now practically made and which will be coming in the market by the middle of October amounting to from 30,000,000 to 50,000,000 bushels according to different estimates. This is a much larger crop than usual and will come into competition with the Indian corn in the various markets of the country. In the cotton growing sections of the country there is normally a considerable production of Indian corn, but this year the corn crop has taken place of about one third of the cotton acreage. Therefore the grain sorghums of the Panhandle will have to find other markets further away from home, principally in California, in the Northwest, East and Southeast. This class of grain has become within the last five or six years a very important production of the feeding of poultry, cattle and hogs and under normal conditions vast quantities would be shipped from the Panhandle to California and the other sections named. Considerable quantities are also used to such points as Chicago, St. Louis, etc., in the manufacture of cereal foods. Under the present level of freight rates, however, there will be practically no demand and the present outlook is that unless rates can be speedily adjusted a very considerable proportion of the Panhandle crop will not be harvested. The normal price of Kafir, Milo Maize and Feterita to the farmer is about \$1 per one hundred pounds and with freight rates ranging from about one-half of this amount to practically the full value of the grain, it can be readily appreciated that the freight rates are prohibitive.

"I understand that the Commission now has under consideration the general proposition of a reduction of rates on grain. I believe that the railroad companies will acquiesce in a very substantial reduction of the rates on these products."

HIGH RATES BLAMED FOR POOR BUSINESS

Railroad executives have presented many figures to show that "freight rates are not responsible for business stagnation," but F. F. Miller, chairman of the Traffic Committee of the Los Angeles Wholesale Hay Dealers Association, thinks otherwise. Here is what Mr. Miller wrote to Senator Cummins:

"We disagree with these statements and believe the rates are responsible for the present business stagnation. To substantiate our claim, there are tens of thousands of tons of hay in Nevada and the northwestern states which heretofore moved into this market. Owing to the exorbitant freight rates there were only a few carloads able to move. This hay can be bought for nine to eleven dollars per ton shipping point, and the freight charges to Los Angeles from Nevada amount to twelve dollars per ton, and is still higher from the other states, which is more than the farmers are asking for their hay. Repeated requests have been made to the carriers for a rate which will enable this traffic to move. So far our plea has fallen on deaf ears and as a consequence the hay is still in the fields rotting. This one example proves conclusively that the high freight rates are in a large way responsible for the present business depression.

"Railroad rates bear an intricate relation to our national prosperity and unless they are lowered quickly there will be a decided shifting of agricultural industry. In this territory the shifting has already begun to take place. Large dairies are moving to localities where the hay is produced in order to avoid paying excessive freight rates for their feed. This means the carriers will then transport one carload of milk where they now haul about twenty carloads of hay. From all indications this one carload of milk will be moved via truck instead of via rail.

"This is another very serious situation which confronts the carriers in this territory in the matter of the inroads the truck lines are making into the revenues of the rail lines. During the year 1916 there were 9,343 carloads of hay received via rail at Los Angeles, while in 1920 there were only 4,711 carloads, or a decrease of 50 per cent. The consumption of hay here is at least 20 per cent greater now than it was in 1916, and still the shipments via rail show a decrease. The only answer is that the trucks have invaded the transportation business and are now moving vast quantities of freight at a less cost than same can be moved via rail. The members of this Association alone transported equivalent to over 5,000 carloads of hay by truck during 1920.

"As every effective reduction in freight rates on important farm products will result in the saving to thousands of farmers from bankruptcy, we call upon your committee to co-operate with us, promptly and energetically, in bringing about all reductions that are possible."

TRANSPORTATION

RATES ON VELVET BEAN MEAL

Examiner Charles R. Seal, in a report on No. 12133, Monarch Mills vs. Central of Georgia, has recommended a holding that the rates on velvet bean meal from points in Georgia and Alabama to Chattanooga during Federal control and since were and are unreasonable, because and to the extent that they exceeded, exceed or, for the future may exceed the contemporaneous rates on cottonseed meal. Seal also recommended reparation done to that basis.

OHIO RATES TO BE REVIEWED

Notice is received from the Public Utilities Commission of Ohio, in connection with their Docket No. 2327, that further investigation of intrastate rates on grain and grain products, live stock, agricultural lime and limestone, commercial fertilizer, fruits and vegetables, seeds, and agricultural implements, will be continued at Columbus, September 20, 1921, at 12:30 p. m., Central time. This, of course will deal only with rates for movement of the above material entirely within the border of the State of Ohio.

REDUCTION IN GRAIN RATES

Special permission to make a 7.5 cent reduction on all-rail export rate on grain was issued by the Commission August 18. It applies from Chicago and Mississippi River crossings and points east thereof to Atlantic ports. The tariffs may be filed on 10 days' notice. A like reduction is expected on lake-and-rail rates from the Northwest, but what the lines serving the Gulf will do is a question well-informed men would not guess about.

At the same time the Commission announced a 5-cent reduction on export flour when made from grain brought into Buffalo by lake. That is the natural sequel to the like reduction on export lake grain, announced some time ago. That reduction may be made on 10 days' notice.

Gulf port lines, both east and west of the Mississippi, have been authorized to reduce their rates 5.5 cents and by smaller amounts from points in the territory west of the Missouri River. That means that shippers from the territories affected may continue to use the Gulf ports. In the event they are not induced to ship to the east the eastern lines, and also the Canadian lines, will lose revenue; so will the Gulf port lines. As a matter of fact, traffic will be disturbed but little.

Reduction in the export rates on grain and the application of the Central Freight Association lines for permission to cut the domestic rate 4.5 cents made railroad traffic managers attending the western grain rate hearing suggest that if the petitioning state commissioners and the farm organizations would only be patient the railroads them-

selves, by reason of disagreements, would bring grain rates down to a point where there would be no ground for complaint.

WESTERN GRAIN RATE HEARING

On August 15 hearing began in western grain rate case, No. 12929, before practically the entire Commission. Chairman Reed, of the Kansas commission, made a general statement, saying the only purpose was to tell a simple tale of the distress of a great industry. He said that by appropriate testimony the complaining states would show the condition of the territory involved, which he said produces 75 per cent of the wheat, 53 per cent of the corn, 64.9 per cent of the oats, 89.9 per cent of the barley, 65.4 per cent of the rye, and a large part of the hay tonnage of the United States. Grain, he said, was being produced and sold at a loss to the growers. If conditions were not changed production would decline until the hunger of the world demanded a greater production at prices that would return to the grower the cost and a profit.

"We will show that transportation charges have increased, from 60 to 140, yes, 175 per cent, over the level of rates in 1913 and that the earnings by the carload have increased, by reason of increased loading, to 230 per cent of the 1913 earnings," said Mr. Reed. "We will show that this industry cannot continue under such conditions.

"We do not claim that the increase in rates is the only cause of the distress. But we will contend that it is the chief cause. Transportation rates are wholly out of proportion. They are beyond what the traffic will bear."

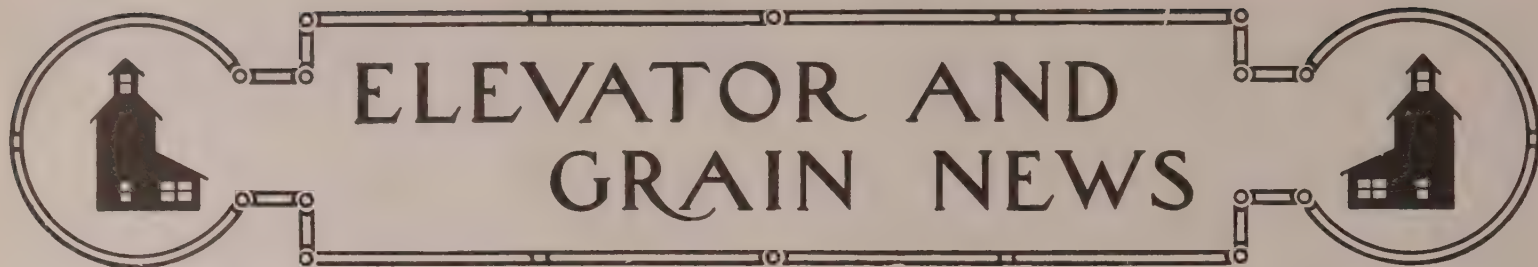
On September 3 the hearing was concluded and the Commission promised to give immediate attention to the mass of testimony offered, and that a decision would be made within three weeks.

TRANSPORTATION TAX MAY BE REPEALED

The House Committee on Ways and Means reported to the House the Republican Revenue Bill, which, among other things, provides for repeal of the taxes on various forms of transportations as of January 1, 1922. The bill repeals subdivisions a, b, c, d and e of Section 500 of the revenue act. These subdivisions relate to the taxes on freight, express, passenger, Pullman seats and berths, and pipe line transportation.

In the report on the revenue bill, the House Ways and Means Committee said with respect to the repeal of the taxes on transportation:

"The cost of transportation is reflected in all lines of commerce and industry, and much of the excessive cost of certain products can be attributed to transportation costs. Especially is this true with regard to building material. The repeal of the transportation tax will relieve the shipper and



ELEVATOR AND GRAIN NEWS

CANADA

The capital stock of the Hepworth Grain Company of Winnipeg, Man., has been increased from \$5,000 to \$50,000.

Newspaper reports state that probably there will be effort made by the Provincial Government of Manitoba to dispose of 126 elevators owned by it. Twenty-four of these elevators are not in operation, 96 are leased to the United Grain Growers, and six are leased to private companies.

The Gillespie Terminal Grain Company, Ltd., has purchased Elevators "A" and "C" of the Canadian Pacific Railway Company at Fort William, Ont. The Horn Elevator at Port Arthur has also been purchased by the Gillespie firm. The total capacity of the Gillespie properties is now 3,250,000 bushels.

EASTERN

J. A. and L. G. Woodruff have chartered the Feed & Grain Clearing house at Lackawanna, N. Y. Its capital stock is \$60,000.

D. V. Heck is now associated with W. F. Heck & Co., wholesale grain, hay and feed dealers at Pittsburgh, Pa. He was formerly a partner with Hardman & Heck.

R. G. Davis, H. H. Davis and L. L. Davis have incorporated R. G. Davis & Sons at New Haven, Conn. The company succeeds the firm of R. G. Davis. The company is capitalized at \$350,000.

The plant of the Lancaster Mill & Elevator Company of Lancaster, Pa., and that of the Anderson Bros. & Co. at York, Pa., have been purchased by John W. Eshelman & Sons, feed manufacturers of Lancaster.

A new company has been organized at Hamden, Conn., and has purchased a site there on which it will erect a grain elevator and coal sheds. Thos. E. Hadden of New Haven is said to be at the head of the company.

The H. A. Perkins Company, Inc., of White River Junction, Vt., has under course of erection an elevator. The plant will be equipped with an electric motor, feed mill, hopper scale, conveying machinery and other modern equipment.

IOWA

The elevator of the Farmers Elevator Company at Harcourt, Iowa, which burned, is to be rebuilt.

The Farmers Elevator Company of Odebolt, Iowa, has purchased the elevator of J. L. Bruce.

The management of the Farmers Elevator Company of Rockwell City, Iowa, is under B. E. Stonebraker.

On August 22, the Des Moines, Iowa, office of the Blair Elevator Corporation was closed temporarily.

The Farmers Co-operative Company of Rock Rapids, Iowa, will erect a new office and sales room, 25x60 feet.

M. M. Mason is succeeded as manager of the Farmers Grain Company of Cambridge, Iowa, by Cecil Anderson.

The main offices of the Merchants Elevator Company of Minneapolis, Minn., have been moved to Davenport, Iowa.

The Iowa Corn Products Company of Grinnell, Iowa, has completed a new elevator there of concrete construction.

Frank Thompson is the successor to W. B. Richardson as manager for the Farmers Elevator Company at Swea City, Iowa.

The Farmers Union Co-operative Company of Tingley, Iowa, has let the contract for the rebuilding of their grain office and elevator.

The elevator at Dow City, Iowa, belonging to the Jack Ahart Estate has been purchased by Jay Dwine. He will continue the business.

The entire plant of the Farmers Elevator Company at Dawson, Iowa, has been sold to R. S. Witter who has been in the grain business for many years.

The name of the Bowles-Kessler Grain Company at Algona, Iowa, has been changed to that of the Algona Flour & Feed Company. W. A. Dutton is manager.

The elevator at Inwood, Iowa, owned by T. E. Moen & Son has been leased by G. A. Lyon. T. E. Moen & Son have leased the elevator of the

Farmers Elevator Company now owned by the Inwood Elevator Company.

G. A. Stibbens is now located at Creston, Iowa. He was formerly located at Red Oak, Iowa.

The Froning Grain & Lumber Company has purchased the grain and lumber business of B. F. Vorhes at Liscomb, Iowa. The company has taken possession.

The grain elevators, seed houses and coal sheds of F. M. Keeney & Son at Woodburn, Clark County, Iowa, have been leased by Wm. Bell & Son of Osceola. The company will continue the business.

The business and plant of the Jackson Grain & Feed Company of Cedar Rapids, Iowa, have been purchased by Alex Siniako & Son of Madison, Wis. The name of the firm has been changed to the Iowa Milling Company.

INDIANA

The Henne Elevator at Richmond, Ind., has been purchased by Thos. B. Fox of Greenville.

The Steuben Grain Company located at Pleasant Lake, Ind., has filed articles of incorporation.

A new elevator is being erected at Milan, Ind. by H. H. Crum, replacing the one which burned.

Frank Darrow is manager of the Farmers Elevator Company at Rockfield, Ind. He came from Wolcott.

Ben H. and John A. Hartman have purchased for the consideration of \$5,000, the grain elevator of A. Waller & Co., near Evansville, Ind.

John C. Bunch, James B. Jordan and Fred Elliott have incorporated at Crete (Lynn p. o.), Ind., as the Crete Elevator Company. The company is capitalized at \$20,000.

George P. Bowen & Co., have sold their elevator located at Crete (Lynn p. o.), Ind., to the Farmers Co-operative Company. The new owners will take over the property on September 15.

To deal in grain and cereal products, Carl D. Menzie, John G. Consodine and I. G. Holdaway have incorporated at Indianapolis, Ind., as the Carl D. Menzie Grain & Brokerage Company. The company is capitalized at \$25,000.

Clifford Fisher, C. S. Pierce and C. L. Northlake have sold the property at Hartford City, Ind., which they have been operating as the Hartford City Grain & Milling Company to Edwin C. Wright of Greenville, Ohio. The owner will make improvements to the plant.

ILLINOIS

The grain business of J. M. Ernst & Son at Arcola, Ill., has been purchased by W. H. Smith & Son.

Chas. Liken is succeeded by C. H. Luckenbill as manager of the Argenta Grain & Milling Company or Argenta, Ill.

The Spires Elevator Company of Spires (p. o. Minonk), Ill., has equipped its plant with a 15-horsepower Fairbanks Engine.

The capital stock of the Illinois Feed & Elevator Company of Bloomington, Ill., has been increased from \$125,000 to \$150,000.

A new warehouse is to be built at Taylor Ridge, Ill., for the Farmers Elevator Company. The building will be 24x60 feet, two stories in height.

H. V. Teel's new grain elevator is completed at Rushville, Ill. It has a capacity of 25,000 bushels and is equipped with modern grain handling facilities.

The contract has been let by the Cuppy Bros. of Humboldt, Ill., for a \$16,000 elevator. The elevator will be of cribbed construction covered with galvanized steel siding. This replaces the elevator which burned a year ago.

A site at Plano, Ill., has been purchased by the Plano Farmers Co-operative Grain Company. The firm will erect an elevator and handle lumber, feed, fencing, etc., as sidelines. John Brunham is president and L. A. Sears, secretary of the firm.

A. J. Poorman & Co., have filed articles of incorporation at Fairfield, Ill., and will handle grain, seed and hay. The capital stock of the firm is \$25,000. The incorporators are: A. J. Poorman, D. V. Wheeler, and S. T. Pendleton. The company will have offices at Fairfield and Rinard.

Capitalized at \$50,000, the Little Mackinaw Grain Company has been organized at Minier, Ill. The directors of the company are: F. S. Freitag, Wm.

Kuhfuss, and Fred Myers. The company's principal office will be located at Minier, with R. F. Quigg, general manager, in charge.

The Farmers Grain & Lumber Company's new 50,000-bushel elevator at Newman, Ill., has been completed and put into operation. This replaces the one which burned last fall.

OHIO AND MICHIGAN

The Farmers Co-operative Elevator Company has been organized at Owosso, Mich.

The Ashville Grain Company of Ashville, Ohio, is going to cover its elevator with iron siding.

Capitalized at \$40,000, the Farmers Elevator Company has been incorporated at Laingsburg, Mich.

The old Henne Elevator at Greenville, Ohio, has been purchased from Chas. Baymon by Thos. Fox.

Capitalized at \$25,000, the Twining Bean & Grain Company has been incorporated at Twining, Mich.

The elevator of the Miami Conservancy Company at Enon, Ohio, has been taken over by Beard & Beard.

The capital stock of the Farmers Grain & Supply Company at Camden, Ohio, has been increased from \$20,000 to \$40,000.

W. T. Cloverdale has given up his position as manager of the Farmers Co-operative Elevator Company of Fowler, Mich.

The elevator of E. E. Kelley & Co., at Waldron, Mich., has been purchased by H. C. Dachsteiner. Wm. Gorsuch is manager.

The elevator of the Stockbridge Elevator Company located at Burlington, Mich., has been sold to the Farm Bureau Marketing Association.

The Charlevoix Co-operative Association has purchased the elevator at Charlevoix, Mich. Possession was given the new owners at once.

The elevator at Alma, Mich., of the Alma Grain & Lumber Company has been leased by J. Hale & Sons of Ionia. W. T. Naldret is in charge.

The Lucky Farmers Elevator Company's new elevator at Le Moyne, Ohio, has been completed and is now being equipped with machinery.

The Farmers Commercial Grain & Seed Company of Rising Sun, Ohio, has completed a 18,000-bushel elevator. The plan is equipped with modern grain handling facilities.

Gwinn Bros. & Co. of Huntington, W. Va., have purchased the plant of George B. Borror located at Pleasant Corners (Grove City p. o.), Ohio. It is operated by J. M. Nantz.

O. W. Cook & Co., are succeeded in business at Columbus, Ohio, by the Columbus Grain & Hay Company. The new firm is composed of Omer Snyder and Mrs. Mabel Stevenson.

The new 18,000-bushel elevator of the Farmers Co-operative Elevator Association at Hastings, Mich., has been completed. The elevator is built of tile, concrete and steel and cost \$60,000.

Leo White, L. R. McNutt, K. S. Graham, J. G. Carmean and J. I. Milliken have incorporated at Monnett, Ohio, as the Monnett Elevator Company. The capital stock of the company is \$40,000.

Capitalized at \$25,000, articles of incorporation have been filed for the Antwerp Grain Company of Antwerp, Ohio. A. D. Behymer, J. D. Dysert, J. W. Mosier and H. L. Frisinger are interested.

F. B. Roscoe, H. S. McLaughlin, Murray C. Hunter, C. F. Hopkins and R. Roscoe have filed articles of incorporation at Greenwich, Ohio, as the Greenwich Farmers Elevator Company. Capital stock is \$15,000.

Articles of incorporation have been filed for the Garman Grain Company of Delphos, Ohio. The incorporators are: A. L. Garman, Harry M. Viel, Wm. Deuch, G. G. McCoy. The capital stock is \$40,000.

The Oakland Grain Company at Oakland Station (Middletown p. o.), Ohio, has been succeeded there by the Oakland Grain & Lumber Company. W. C. Ihle is secretary-treasurer and F. W. Compson, president of the company.

The new 30,000-bushel elevator of the Geaners Clearing House Association of Grand Rapids, Mich., at Malinta, Ohio, has been completed. The equipment includes a 100-bushel Fairbanks Hopper Scale, wagon scale, sheller, cleaner, etc.

The contract has been placed with Ballinger & McAllister of Bloomington, Ill., for the new large

grain elevator to be built at Detroit, Mich. The work will be commenced at once. The elevator will be operated by the H. C. Carson Elevator Company which will succeed the firm of H. C. Carson & Co.

The new elevator of the Grove City Farmers Elevator Company of Grove City, Ohio, is practically completed. It is equipped with Fairbanks Morse Motors, U. S. Sheller, Howe Wagon Scale, and an automatic scale. Ballinger & McAllister did the construction work.

A grain elevator of 10,000-bushels' capacity will be erected in the near future at New Holland, Ohio, for H. M. Crites & Co. of Circleville. The firm recently built a plant at Island Road and purchased the Rife & Morris Elevator at Circleville, and an elevator at Kinderhook, Ohio.

SOUTHERN AND SOUTHWESTERN

The Gibbons Elevator Company of Cole, Okla., is installing a corn sheller.

A grain, feed and coal business has been opened at Vernon, Texas, by J. D. Ferguson.

The offices of the Crouch Grain Company have been moved from Hillsboro, Texas, to Midland.

The Weaver Rice Elevator and Warehouse at El Campo, Texas, has been bought by its former owner, I. Weaver.

Efforts are being made by farmers around Rayville, La., to organize a company there to build a grain elevator at Rayville.

The elevator of the Coryell County Elevator Company at Gatesville, Texas, has been leased by Wm. Clay of Stephenville, Texas.

A grain elevator and a meal and poultry feed plant are to be built at Oklahoma City, Okla., for the Hardeman-King Company.

A grain business is to be conducted at Cooper, Texas, by the Nelson-Anderson Company. S. H. Nelson and W. Anderson are interested.

The new 50,000-bushel elevator of the Houston Mill & Elevator Company at Houston, Texas, has been completed and put into operation.

The Zobisch Grain Company of Hinton, Okla., will build a new reinforced concrete elevator. The company already has two or three houses.

The Knox City Grain Elevator Company has succeeded the J. H. Davis Elevator Company at Knox, Texas. The Davis company is out of business entirely.

The old Red Deer Grain Elevator at Miami, Texas, is being covered with iron siding and an additional house of 3,500 bushels' capacity is being built.

Fred Varner of Grandfield has made plans for the installation of a grain elevator at Tillman, near Grandfield, Okla. Frank Lower is to be in charge of operations.

Ricou & McKenna have established a wholesale grain, feed and merchandising business at Shreveport, La. Clarence A. Ricou and Edmund P. McKenna are interested.

The elevator and mill of S. C. Wilson at Waxahachie, Texas, have been sold to W. E. Crow. Immediate possession was given the new owner. The consideration was \$40,000.

The elevator of the Oneta Equity Exchange at Oneta, Okla., has been taken over by a company composed of Wm. Hall, H. M. Ware, L. Kelley and several other business men.

The grain elevator, and corn mill of the Farmers Mill & Supply Company of Elk City, Okla., which burned recently, are being rebuilt. The flour mill will not be rebuilt at once.

The elevator of the Moore Grain Company at Ninnekah, Okla., has been purchased by the Ninnekah Grain & Lumber Company. The company will not rebuild its elevator which recently burned.

The Kaw Grain & Elevator Company of Kaw City, Okla., has been organized by Miss B. U. Atchison of Bartlesville and Miss L. Rearick of Rogers, Ark. They have purchased the W. T. Conklin Elevator there.

The interest of W. L. Hutcheson in the Central Grain Company of Oklahoma City, Okla., has been sold to E. L. Beutke, manager. Mr. Hutcheson will devote himself to his interest in the Stockyards Milling Company.

The Western Grain Company of Fort Smith, Ark., was recently re-organized and W. J. Pendergrass was elected president; Edward Hunt, vice-president; Chas. F. Kent, secretary-treasurer. The business will be continued as usual.

Guy Beatty, W. R. Atcher and E. J. Christian have filed articles of incorporation at Houston, Texas, as the Beatty-Archer Company. The capital stock of the firm is \$25,000. It will operate a grain elevator, cotton gin, etc.

The Memphis Elevator & Storage Company was organized at Memphis, Tenn., capitalized at \$20,000. The company will operate the plant until recently used by G. E. Patteson & Co., and will be managed by W. J. Cooner. It will conduct a general busi-

ness of storing grain and manufacturing feeds. A. W. Ketchum is president; J. R. Pepper, S. M. Pepper, M. C. Ketchum and H. H. Honnell are among the incorporators.

Ben U. Feuguay has opened a grain business at Enid, Okla., under his own name. Mr. Feuguay up until June, 1920 owned and operated the White Grain Company, and since then has been interested in the Bruce Bros. Grain Company of Enid.

The Cherokee Grain Company of Oklahoma City, Okla., has surrendered its charter as a corporation and is being operated as a partnership. Willis G. Sautbine is president and manager. No change was made in the management or personnel of the company.

A company is being organized at Athens, Ga., to build and operate a grain elevator, cold storage house, sweet potatoes curing plant and perhaps other facilities for storing and marketing food crops. J. H. Hubert of the Peoples Bank is backing the proposition.

The gallery at the Sunset Elevator belonging to the Southern Pacific Company at Galveston, Texas, is to be rebuilt. It will extend to the end of Pier A and will be 420 feet long, equipped with one 36-inch belt. The Sunset Elevator is operated by the J. Rosenbaum Grain Company.

THE DAKOTAS

A grain elevator at Tyndall, S. D., has been purchased by E. G. Gill of Tripp.

Ernest Ingvald is the manager now of the Farmers Elevator at Halliday, N. D.

The elevator of Hanskutt & Co., at Belvidere, S. D., has been leased by S. W. White.

The Northwestern Elevator at Mayville, N. D., has been purchased by Ed Ulland.

F. A. Wiest is manager of the Farmers Elevator Company located at Richardton, N. D.

Capitalized at \$15,000, the Farmers Grain Company has been incorporated at Rolla, N. D.

H. W. Gentz has accepted a position with the Farmers Elevator at Stanton, N. D., as manager.

The Farmers Elevator at Davis, S. D., is now under the management of C. P. Enright of Elkpoint.

The Farmers Elevator Company of Barney, N. D., is to equip its two elevators with electrical motors.

The Ellis Elevator located at Denhoff, N. D., has been purchased by Davis & Hendricks of Goodrich.

A new elevator is being erected at Grenville, S. D., replacing the Miller Elevator which burned this spring.

An elevator at Columbia, S. D., has been purchased by L. B. Geisler. F. J. Feller will act as manager.

E. W. Ketchum has disposed of his elevator at Putney, S. D., to the Putney Farmers Elevator Company.

A. J. Hoel is succeeded as manager for the Farmers Elevator Company of Rutland, N. D., by H. A. Stagland.

The Highmore, S. D., elevator, formerly known as the Burgeson Grain Company, has been leased by K. G. Ryan.

The elevator of the H. E. Zeeveld Grain Company located at McVile, N. D., has been purchased by M. F. Swanston.

New dumps and scales are to be installed in the elevator of the Farmers Equity Elevator Company at Sterling, N. D.

The Farmers Equity Elevator at Flasher, N. D., is to be conducted under the management of Leroy Irvine of Hazelton.

A ball-bearing steel truck has been installed in the elevators of the Empire Elevator Company at Ipswich and Millbank, S. D.

The Jim River Elevator owned by Oscar Lancel at La Moure, N. D., has been purchased by the Equity Co-operative Exchange.

The Nome Co-operative Grain Company of Nome, N. D., has been chartered to operate there. The company is capitalized at \$25,000.

The management of the Farmers Elevator Company at Temvik, N. D., is now in the hands of H. Coplaugh. He succeeds M. J. Pridt.

John T. Reed has given up his position as manager of the Farmers Elevator Company at Brandon, S. D. W. F. Conway succeeds him.

S. E. Johnson who has been manager of the Farmers Elevator Company of Brandt, S. D., for some time is succeeded there by Wm. Reinstra.

H. H. Wishek, Fred Brosz and W. L. Johnson of Ashley, N. D., have incorporated there as the Brosz Elevator Company. The firm is capitalized at \$25,000.

The Farmers Grain Association of Minot, N. D., has been reorganized as a co-operative association. The directors are John Wallin, H. J. Herzog, John Lee, Chas. Pitran, Howard Myers, V. Carlson, Wm. Lashowski. Capital stock is \$20,000.

C. A. Anderson, H. A. Chrisling, and F. J. Snyder have filed articles of incorporation at Underwood,

N. D., as the Farmers Elevator & Mercantile Company. The firm will handle grain, lumber, etc. The capital stock amounts to \$25,000.

A new elevator is under course of erection at Webster, S. D., for the Miller Grain Company. The new plant will replace the house which burned last May.

The elevator and business of the Farmers Grain Company located at Starkweather, N. D., have been leased by the St. Joe Co-operative Elevator Company.

Repairs have been made to the Steffen Elevator at Belfield, N. D., which has been standing idle for three years. It will be operated on this season's crops.

The Western Elevator Company of Minneapolis has purchased the Winfred, S. D., elevator of the Merchants Elevator Company. A. M. Leicht is manager.

The elevator of the Farmers Elevator Company at Seneca, S. D., has been repaired and a new cupola replacing the one blown off in July has been built.

A half interest in the Sindet Grain Elevator at Volga, S. D., has been purchased by Geo. Cotton. He will take an active interest in the affairs of the company.

The old Ely-Salyards Elevator at New Rockford, N. D., has been taken over by the New Rockford Investment Company. It will be operated on a co-operative basis.

The Monarch Elevator Company has purchased from the Hatton Grain Company of Hatton, N. D., the four elevators which the latter company has been operating.

Extensive repairs are to be made to the elevator of the National Elevator Company at Dunning (Maxbass p. o.), N. D. The contract for the repairs has been let.

The Bingenheimer Elevator at Price, N. D., has been leased by the Mandan Farmers Elevator Company of Mandan, N. D. A. P. Gray is manager of the Price elevator.

The Occident and the Farmers Elevators at Turtle, N. D., are being rebuilt. The Occident Elevators will have capacity of 25,000 bushels; the Farmers, 40,000 bushels.

The C. P. Burnstad Elevator Company at Burnstad, N. D., is succeeded in business there by the Logan County Grain Company. Adolph Ihme will buy grain for the company.

The elevator of the Farmers Co-operative Company at Crosby, N. D., has been leased by Wm. Nott. The plant is being overhauled and will be ready to handle the 1921 crop.

The elevator located at Paulson Siding, near Noonan, N. D., which M. J. Cullen of Minneapolis has leased for the season is being overhauled preparatory to opening for this season's business.

Articles of incorporation have been filed for the Straubville Elevator Company of Straubville, N. D., capitalized at \$25,000. The incorporators are: O. M. Guenther, O. W. Foust, and D. G. Heilman.

MINNESOTA AND WISCONSIN

A grain elevator at Crookston, Minn., has been purchased by J. E. Harmon.

The Tanner Elevator Company has bought up the Erwin Elevator at Burtrum, Minn.

The elevator at Granada, Minn., has been opened by the Independent Grain & Lumber Company.

The Farmers Elevator at Grove City, Minn., is to be conducted under the management of Walter Peterson.

A new platform has been built to the feed house at the elevator of W. L. Johnson located at Hancock, Minn.

H. W. Solnigs is making arrangements for the erection of an elevator at Doty Station (p. o. Eyota), Minn.

The West Concord Farmers Elevator Company is to erect new coal sheds and a warehouse at West Concord, Minn.

The elevator of A. E. Erwin located at Sauk Center, Minn., has been sold by him to the Equity Grain Company.

The elevator of E. J. Crane at Chippewa Falls, Wis., is being enlarged by the erection of an addition, 20x70 feet.

The Farmers Co-operative Elevator at Crosby, Minn., has been leased by William Nott. He took possession immediately.

The elevator at Twin Valley, Minn., operated by M. A. Heiberg has been purchased by Henry Velhe. He will operate the elevator.

Articles of incorporation have been filed at Frost, Minn., by A. E. Amundson and E. O. Dybeviak as the Farmers Co-operative Elevator Company. The company is capitalized to the amount of \$100,000.

After operating the elevator at Taunton, Minn., for 22 years, F. B. Hartwick has resigned his posi-

tion as manager and has gone into business for himself at New Ulm. Geo. Inhofer succeeds him at the elevator.

The contract for general repairs to be made to its elevator of the E. N. Nelson Company of Clithrell, Minn., has been let.

A farmers organization has been formed at Lockhart, Minn., which has leased a line house there and opened it for business.

The St. Anthony & Dakota Elevator at Kennedy, Minn., has been reopened for business under the management of A. B. Stewart.

Business operations have been resumed in the Farmers Elevator at Cloverton, Minn. A. A. Mostue is in charge of the plant.

A new elevator costing \$50,000 has been completed and put into operation at Sleepy Eye, Minn., for the Farmers Elevator Company.

Louis Hansen has purchased the elevator at Dundas, Minn., which has been shut down for some time. Mr. Brown will have charge.

The elevator of the Bennett Grain Company at Okabena, Minn., has been closed down. Lack of business was given as the reason for this.

Overhauling and general repair work is being done to the Farmers Elevator located at Porter, Minn., preparatory to the general fall business.

Four concrete wheat storage tanks are to be built at Minneapolis, Minn., for the Atkinson Milling Company. They will cost approximately \$18,000.

The Peterson Produce Company has sold its elevator and grain business at Embarrass, Wis., to a company recently organized by John McClone.

A new dust collecting system is being installed in the plant of the Farmers Equity Elevator Company at Kimball, Minn. Repairs are also being made.

The elevator of the Burley Elevator Company at Neillsville, Wis., of which Fred Bruley is president, is being remodeled and equipped with a new addition.

The produce business of R. J. Leuders at Columbus, Wis., has been taken over by Guy V. Dering, who has been in the grain, feed and coal business for some time.

A farmers elevator company has been organized at Rushford, Minn. George Hupline was elected temporary chairman of the organization and Paul Bunke, secretary.

The elevator of the Hibbing Produce Company at Hibbing, Minn., has been moved to South Hibbing. The plant has been remodeled and equipped with new machinery.

Repairs are to be made to the elevators of the Farmers Elevator Company at Truman, Minn. The houses are to be re-sided with metal and equipped with new machinery.

The new elevator of the Farmers Elevator Company at Glenwood, Minn., has been completed. The company in addition to operating the elevator will handle coal as a sideline.

McPeak & Co. of Waseca, Minn., has leased for a period of one year the Palmer (r. f. d. Waseca), Minn., elevator. Operations were started by them the latter part of August.

The farmers organization at Lewiston, Minn., has purchased the property formerly operated by Kimmel & Myers at Lewiston. The consideration for the property was \$32,000.

George J. Leicht, Frederick A. and A. D. Draper have filed articles of incorporation as Wausau, Wis., as the Central Wisconsin Feed & Grain Company. Its capital stock is \$25,000.

Farmers in the neighborhood of Houston, Minn., have organized a new elevator company and are contemplating the purchase of the property of the Farmers Elevator Company there.

K. B. Wilson recently purchased the elevator at Wadena, Minn., formerly controlled by S. M. Reitor. The K. B. Wilson Company has been organized by him. Capitalized at \$25,000.

The elevator at Cray (r. f. d. Lake Crystal), Minn., has been purchased by Hubbard & Palmer Company. The elevator will be operated in conjunction with their plant at Lake Crystal.

The Farmers & Merchants Milling Company's new elevator at Glencoe, Minn., is completed. It is covered with galvanized iron and has a capacity of 30,000 bushels. Mr. Green is manager.

During the month of October, the Altura Elevator Company of Altura, Minn., will erect an elevator. The company will probably carry side lines, such as coal, salt, fencing, cement, lumber, steel, etc.

The elevator of the Tyler Grain Company at Tyler, Minn., has been repaired and put into first class condition for the season's business. A new driveway platform was put in and numerous other improvements made.

The Claybank Farmers Grain Company has been organized at Claybank (Goodhue r. f. d.), Minn. William Gorman, Thomas Moran, C. Holst, Geo.

Mix and Henry Gerdes are the Board of Directors. The company has purchased the property of the Fleischmann Company and has overhauled it completely.

The Hubbard & Palmer Elevator at Grogan, Minn., has been traded in by its owners for the cleaning house of the St. John Elevator Company at Worthington, Minn. The St. John company is making improvements on its new property.

The Milwaukee Chamber of Commerce has declared regular the following elevators: The Chicago & Northwestern Rialto Elevator operated by Donahue-Stratton Company and the Milwaukee Elevator "E" operated by the Taylor & Bournique Company.

Business was started on August 15 in the grain elevator and feed warehouse formerly owned by O. W. Johnson at Cambridge, Minn. It is now the property of Nelson & Co.; George A. Nelson is in charge. The company will handle flour, mill feeds, corn, oats, etc.

To conduct a general business in grain and other farm products, the Comstock Co-operative Company has been incorporated at Comstock, Wis. Its capital is \$35,000. The incorporators are: W. A. Gierhart, O. A. Olson, E. Leetch, A. Duser and several other business men.

Fifty-five grain elevators along the Great Northern and Northern Pacific Railroads in the states of Minnesota and North Dakota have been purchased from the Northwestern Elevator Company by the Monarch Elevator Company. This purchase gives the Monarch Company 175 grain houses.

MISSOURI, KANSAS AND NEBRASKA

A new elevator has been completed at Burdette, Kan., for J. W. Mead of Sanford.

The elevator of E. G. Taylor at Farwell, Neb., is being overhauled for this fall's business.

The Equity Exchange of Beverly, Kan., is building a new elevator of cribbed construction there.

A 5,000-bushel grain elevator has been completed at Dixon, Mo., for the Farmers Co-operative Company.

A new scale is being installed in the elevator of the Farmers Union Elevator Company of Scotts-ville, Kan.

The Sublette Grain Company is installing a 10-ton Howe Auto Truck Scale in its elevator at Sublette, Kan.

A grain cleaner has been installed in the plant of the Lindley C. Binford Grain Company at Haviland, Kan.

Business operations have been started in the elevator located at Dighton, Kan. V. O. Davis is in charge.

J. A. McKinney is succeeded as manager of the C. E. Robinson Elevator at Jennings, Kan., by Joe Cummings.

Capitalized at \$5,000, the Farmers Elevator Company has been incorporated at Ruby (r. f. d. Milford), Neb.

Wm. Dickson has purchased the elevator establishment of the Farmers Elevator Company at Anselmo, Neb.

The Barnett Farmers Elevator Company has opened an exchange at Eldon, Mo., and is handling feed, poultry, etc.

An elevator is to be erected at Milo, Kan., for the Robinson Grain Company whose headquarters are at Salina, Kan.

The new plant of the Curryville Elevator Association at Curryville, Mo., has been completed and is ready for operation.

George Markus is now manager of the Farmers Elevator Company of Petersburg, Neb. He succeeds Anton Brinkman.

The Jennings & Roller Grain Elevator at Almena, Kan., is under the management of J. W. Galley of Franklin, Neb.

The old building at Trenton, Neb., occupied by the Farmers Equity Exchange is to be removed and replaced with a new one.

Dave Bourke's interest in the elevator at Horton, Kan., has been purchased by John Graham. He has now taken possession.

The grain elevator of Mayor D. Wort at Eddyville, Neb., has been purchased by W. A. Summers, H. S. Clouse and R. L. Clouse.

Operations have been stopped by the Leopold-Briggs Grain Company which has been operating at Omaha, Neb., for several years.

The Robinson Grain Company of Salina, Kan., is interested in the erection of a modern 40,000-bushel elevator at Wakeeney, Kan.

Repairs have been made to the elevator operated by the farmers at Homer, Neb. The elevator was raised and a new foundation put in.

The power plant of the O. A. Cooper Company of Humboldt, Neb., has been enlarged, as it furnishes light and power for the town as well as

for the operation of the elevator and mill. A new Corliss Engine and 240 k. w. generator have been installed.

P. Christenson of Pender, Neb., is the new manager of the Farmers Elevator at Bradshaw, Neb., succeeding C. L. Gilbert, who resigned.

Capitalized at \$10,000, the Farmers Elevator Company has been organized at Waverly, Mo. T. Landrum is a director of the company.

The elevator of the Farmers Elevator Company at Castleton, Kan., has been leased by Krehbiel & McCaffery. John McCaffery is manager.

The capital stock of the Farmers Co-operative Elevator & Shipping Association at Kirksville, Mo., has been increased from \$10,000 to \$20,000.

The construction of the new elevator of the Farmers Co-operative Elevator & Mercantile Company at Burlington, Kan. has been completed.

Management of the Farmers Co-operative Elevator Company of Mount Hope, Kan., is now in the hands of Grover Hutton. He succeeds B. Black.

The Sutherland Elevator Company and the Lexington Mill & Elevator Company of Sutherland, Neb., have both made repairs to their elevators.

The West Elevator of Penalosa, Kan., has been sold by the Farmers Grain & Mercantile Company to the Produce Grain Company of Spearville, Kan.

Extensive improvements are being made to the elevator of the Hugoton Co-operative Equity Exchange of Hugoton, Kan. New dumps are being installed.

H. B. Atterbury is succeeded as manager of the Madison Elevator Exchange of Madison, Mo. by L. G. Abel. He took over the management on August 1.

The interest of J. C. Harden in the Taylor-Harden Grain Company at Loup City, Neb., has been sold. He is now with the Norris Grain Company of Omaha.

E. F. Jones, R. W. Parmatier and C. C. Dunning have filed articles of incorporation at Stockton, Kan., as the E. F. Jones Grain Company. The firm is capitalized at \$100,000.

The House at South Auburn, Neb., owned by T. J. Gerdes has been leased by Chris Sorenson who has been manager of the elevator and will be operated independently by himself.

The Stapleton Farmers Union Elevator Association has purchased the elevator at Stapleton, Neb., formerly operated by the Lexington Milling & Elevator Company of Lexington, Neb.

The Rogers Elevator located at Lucas, Kan., has been purchased by the J. E. Weber Company of Kansas City. The plant has been opened for business with K. E. Ekey as local manager.

The Canton Co-operative Company has completed its 20,000-bushel elevator at Canton, Mo. The elevator is 60 feet high, 23x35 feet and contains eight bins. Glenn Rogers is manager.

A grain elevator is to be erected at Hugoton, Kan., by George Stockstill in the near future. He recently purchased the site owned by the Dodge City Alfalfa Mill & Elevator Company and will build on it.

Miner & Justice's elevator at Oberlin, Kan., which was recently completed is ready for business. The elevator is built of lumber, covered with corrugated galvanized iron, and has a capacity of 10,000 bushels.

The elevator owned by E. L. Thelen at Wood River, Neb., has been leased until July 1, 1922 by the Wood River Co-operative Grain Company. Mr. Thelen has been engaged in the grain business there for 20 years.

An elevator is being erected by C. S. Young at Lyman (Sutton p. o.), Neb. The elevator will be operated in connection with Mr. Young's lumber and coal business. The plant will be ready the last of September.

The Maxwell, Neb., elevator of the Leypoldt & Pennington Company of North Platte has been sold to the Farmers Co-operative Association. Its Ogalla, Neb., elevator has been sold to the Combined Elevator Company.

The Mulvane Co-operative Union of Mulvane, Kan., has let the contract for a new elevator. The elevator will be of reinforced concrete and will be built in conjunction with their present mill and warehouse. The two old elevators were considered fire-traps by the company and this led to the erection of the new elevator.

In an effort to reorganize the Nye-Schneider-Fowler Company of Fremont, Neb., 35 stockholders on September 1 agreed to submit their stock or a portion of it to be purchased by the protective committee of the organization. Julius Barnes is to head the company under the agreement. The Nye-Schneider-Fowler Company has been in financial difficulties for some time.

The new 30,000-bushel elevator of the Emma Co-operative Company at Emma, Mo. has been completed. It consists of a two-story warehouse, a two-story office building, and an eight-bin elevator. The plant is in operation. The machinery includes

a five-bushel automatic scale, a 10-ton Howe Truck Scale, U. S. Cleaner, and U. S. Corn Sheller. A ball bearing manlift operates the elevator, and a freight elevator runs between the two floors of the warehouse.

The Sweet Springs Milling Company of Sweet Springs, Mo., has purchased some new machinery for its elevator, including a 9-inch spiral conveyor to be installed between the elevator and the mill building, and a new loading out spout.

Additional storage for 25,000 bushels of grain is being provided for the Belleville Mill & Elevator Company of Belleville, Kan. A new wheat storage tank of 10,500 bushels' capacity is being built to the north end of the main building; and a new flour warehouse for 10,000 bushels of finished products is also being built.

WESTERN

George O'Dwyer, Inc., of St. Maries, Idaho, has erected a small elevator and feed plant there.

A new elevator of 50,000 bushels' capacity has been completed for W. A. Gray at Buhl, Idaho.

The elevator of Peter T. Berven at Bundy, Mont., has been leased for one year to F. L. Finnegan.

The elevator of the Raymond Farmers Elevator Company at Raymond, Mont., which burned, is to be rebuilt.

The elevator of the Farmers Co-operative Elevator Company at Laird, Colo., has been enlarged and improved.

A new grain elevator of 30,000 bushels capacity is being erected at Scobey, Mont., for the Scobey Grain Company.

A grain elevator is to be erected at Branson, Colo. for the Great West Mill & Elevator Company of Amarillo, Texas.

D. B. Sportsman is successor to Lester L. Yowell as manager of the Calhan Farmers Co-operative Elevator Company of Calhan, Colo.

To conduct a general grain business at Harlowton, Mont., the Real-Wheat Co-operative Company has been organized, capitalized at \$25,000.

The grain elevator of Irwin & Co., at San Diego, Calif., is being overhauled and repaired. The company also operates at El Cajon and Chula Vista.

Improvements are being made to the elevator of the Missoula Mercantile Company of Missoula, Mont. A new 10-ton scale will also be installed.

The Chehalis Grain Company is succeeded at Chehalis, Wash., by the Chehalis Grain & Fuel Company. The company is capitalized at \$25,000.

The Farmers Milling Company of Eden, Idaho, is making a five-bin addition to its elevator. The total capacity of the plant will be 50,000 bushels.

R. F. Armstrong, J. F. Akolt and K. F. Cross have incorporated at Adams, Colo., as the Darlow Grain & Supply Company. Its capital stock is \$17,500.

A number of improvements have been made to the plant of the Holyoke Grain Company of Holyoke, Colo. A 10,000-bushel granary has been erected.

Repairs are being made to the plant of the Wendell Milling & Elevator Company of Wendell, Idaho. A clipper and seed cleaner are also being installed.

The Mitchell & Barkley Elevator at Paoli, Colo., has been purchased by the Renner, Smith Grain Company at Holyoke. Possession was given on August 1.

The offices of the Flanley Grain Company in the Cooper Building, Denver, Colo., are now occupied by the recently organized Houlton Grain Company.

The Farmers Elevator at Coffee Creek, Mont., has been leased for this season to the P. F. Brown Grain Company of Lewistown. George Hayes will be manager.

The Ambler Grain Company has completed at Lamanda, Calif., a 25x50 foot tile office. A new concrete loading and storage platform has also been built.

Capitalized at \$15,000, the Pasco Grain & Milling Company has been incorporated at Pasco, Wash. A. Koerner, C. J. Young and Ben C. Day are the incorporators.

A grain elevator of 30,000 bushels' capacity is to be erected at Cheraw, Colo. for the La Junta (Colo.) Milling & Elevator Company, if present plans materialize.

The warehouse of the Pacific Grain Company at Ritzville, Wash., has been leased by the O'Neill Grain Company of Spokane. W. J. Ross is in charge of the warehouse.

A grain and bean brokerage company has been organized at Marysville, Calif., by J. F. Baker and C. E. Lazear. The company will take over the office of the Johnson Bros.

The Springdale Grain & Creamery Company of Springdale, Wash., has built a new warehouse and creamery station there. The business will be under the management of W. W. Wedge of the Deer Park

Grain Company. The company will buy grain, hay, wood and other products and will maintain a modern creamery in connection with their Deer Park establishment.

The elevator of the Farmers Mercantile Elevator Company at Sidney, Mont., was closed for a short while. Numerous repairs were made during the time it was not in operation.

The H. M. Fike Elevator at Jerome, Idaho, has been purchased by the Wheat Growers Association. It was opened for business August 15 under the management of J. D. Rigney.

To carry on a general grain business the Heath Grain Company has been incorporated at Denver, Colo., capitalized at \$10,000. The directors are: F. A. Heath, Z. E. Smith and R. L. Orvis.

The grain elevator at Julesburg, Colo., has been purchased from S. M. Beadle by Rollie Wilson, P. H. Achenbach and Harry Souders. The company will operate as the Wilson Grain Company.

Oscar A. Beard, Frank Leckenby and W. H. Libby have filed articles of incorporation as Lilly's Yakima of Yakima, Wash. The company will deal in grain and cereals, flour, food and food products.

The Colorado Milling & Elevator Company of Denver, Colo., has let the contract for the erection of a 40,000-bushel elevator at Pierce, Colo. The elevator will be completed about September 1.

The Red Lodge, Mont., elevator of the Treasure State Grain Company has been purchased by the Montana & Dakota Grain Company. The Treasure Company has been operating elevators at Fox, Roberts, Boyd, Coombs, Merrill and Red Lodge; all of these plants now belong to the Montana & Dakota Company. The Montana Company recently

sold 22 elevators in the northern part of the state and has entered the field in the southern and eastern sections.

The warehouse and fixtures at Caldwell, Idaho, formerly owned by Holt Seed Company has been purchased by F. L. Lilly. He has organized the Idaho Seed Company and will handle grain and field seeds.

G. W. Breckenridge, W. J. Maddox, Carl F. Noble, Chas. G. Brass and F. H. France have filed articles of incorporation as the Farmers Grain Company at Grassrange, Mont. The capital stock of the firm is \$20,000.

Nine elevators located at Rexburg, Rigby, Inkom, McCammon, American Falls, Schiller, Virginia, Arimo, and Downey, Idaho, have been leased from the Intermountain Farmers Equity Company by the Globe Milling Company of Ogden, Utah.

Richard Teslow has purchased the elevator at Richey, Mont., which was formerly owned and operated by the Montana & Dakota Grain Company. The elevator was purchased recently from the Montana & Dakota concern by the Occident Company.

The warehouse and produce business formerly conducted at Troy, Idaho, by W. M. Duthie have been sold by him to the North Idaho Growers Warehousing Corporation, a branch of the American Grain Growers Association. The consideration was \$14,500.

The Lambert and Lane, Mont., elevators of the Montana & Dakota Grain Company have been purchased by the International Elevator Company. At Lane, Manager Graham will continue in that capacity; at Lambert, H. H. Thorpe has been made manager.

FIRES-CASUALTIES

Brady, Mont.—Frederick F. Lewis' elevator here was destroyed by fire recently.

Nashville, Tenn.—Fire damaged the warehouse of the Haymarket Grain Company.

Napoleon, Ohio.—Fire damaged slightly the elevator of J. H. Vocke & Son recently.

Crystal, N. D.—Fire destroyed the E. F. Doran Elevator Company's plant not long ago.

Irene, S. D.—The elevator belonging to G. E. Gunderson was seriously damaged by fire.

Hillsboro, N. D.—Slight damage was done to the Monarch Elevator here by fire on August 24.

Lehr, N. D.—Lightning struck and did slight damage to the Eichhorn Elevator at this place.

North Little Rock, Ark.—The plant of the Missouri Pacific Grain Company here was damaged by fire.

Kemp, Ill.—Munson & Moses' elevator caught fire on August 8 from an unknown cause. The loss is slight.

Henderson, Minn.—Lightning struck and caused a total loss of the old Poehler Warehouse on August 16.

Lake City, Minn.—The elevator owned by the Hunting Grain Company was damaged by fire not long ago.

Malad City, Idaho.—Lightning struck and caused a slight damage to the Oneida Farmers Union's elevator here.

Clarendon, Texas.—Fire destroyed the sheds and 75 tons of hay in the Clarendon Grain Company's establishment.

Escanaba, Mich.—The Hewitt Grain & Provision Company lost its stable and hay barns by fire with a loss of \$5,000.

Artas, S. D.—On August 17 the Artas Equity Exchange experienced a small damage when lightning struck its elevator.

Oakdale, Wash.—The Palmerton-Moore Grain Company, Inc., was subjected to slight loss on their elevator on July 22.

Bessie, Okla.—J. Gerlach's elevator was totally destroyed on August 25 by fire originating from some unknown cause.

Sheldon, Iowa.—On August 10 lightning struck and set fire to the Jenkinson Elevator. The damage done was slight.

San Jose, Calif.—On August 9 fire destroyed the warehouse and cleaning plant of the California Seed Growers Association.

Three Forks, Mont.—The elevator of the Grain Growers Co-operative Company here was destroyed by fire. It will be rebuilt.

Andrews, Ind.—Fire started on August 21 in the elevator of the Andrews Equity Exchange and damaged it slightly. The cause was unknown.

Philadelphia, Pa.—M. L. Laschik's four-year old son was burned to death in a fire which destroyed

his feed warehouse on August 10. The building was completely destroyed. The loss on property amounted to \$5,000.

Remington, Ind.—The elevator owned by Wilkison & Evans burned completely on August 24. The fire started in the cob house.

Laredo, Texas.—Fire partly destroyed the Leyendecker Warehouse containing a considerable quantity of feed valued at \$2,000.

Columbia Crossroads, Pa.—On August 30, with a loss of \$20,000, the feed mill and adjoining building located here were burned.

Paulding, Ohio.—Bitner & Pollock's elevator caught fire on August 17. The fire was of unknown origin. The damage done was slight.

Somerset, Ohio.—The Farmers Co-operative Elevator Company was subjected to a slight loss when lightning struck its property on August 11.

San Antonio, Texas.—The warehouse of the San Antonio Grain Company and of the V. A. Webster Grain Company were damaged by fire recently.

Eaton Rapids, Mich.—The Abrams' grain elevator here together with 50,000 bushels of wheat burned recently. The loss amounted to \$30,000.

Cheesboro, near Gananoque, Ont.—On August 29 the feed storehouse of the Leeds Farmers Co-operative Society burned. The plant was a total loss.

Greenville, Mich.—The mill and part of the elevator of the R. T. Tower Milling Company was damaged on August 20; the loss amounted to \$10,000.

Cedar Falls, Iowa.—A small loss occurred in the elevator owned by the Farmers Co-operative Company recently. The exact origin of the fire is unknown.

Abilene, Kan.—On August 12 the elevator of the Farmers Co-operative Elevator Company caught fire from an unknown source, creating a small damage.

Big Sandy, Mont.—Serious damages were done to the elevator owned by the Farmers Produce Company, on August 12. The origin of the fire is unknown.

Marsh, Iowa.—Lightning struck and completely destroyed the elevator here owned by Beck & McClurkin of Morning Sun. The loss is fully covered by insurance.

Primghar, Iowa.—Fire, believed to have had its origin from locomotive sparks, broke out in the elevator of E. C. Propp on August 13. It was extinguished quickly with but slight damage to the property.

Minneapolis, Minn.—Damages amounting to \$50,000 were done by fire and water to the Erie Elevator here operated by the Fleischmann Malting Company. Automatic sprinklers prevented serious losses.

New Canton, Ill.—On August 18 fire destroyed the King Elevator here. The estimated value of

the building was \$10,000. About 12,000 bushels of wheat were on hand at the time of the fire. The loss is covered by insurance.

Kaufman, Texas.—The Lyle Grain Company's feed and grain warehouse burned with a loss of \$8,000. The insurance carried on the plant amounted to \$6,000.

McKinney, Texas.—Fire destroyed with a loss of \$2,500 the feed store of A. E. Daw. A large quantity of hay, oats and corn was stored in the plant at the time of the fire.

Tarrytown, N. Y.—On July 27 fire destroyed completely the elevator here owned by Edward Buckhout. Hay, straw, oats, and flour were consumed. The loss amounted to \$5,000.

Rosthern, Sask.—Fire destroyed on August 23 the elevator of the Union Supply Company. The fire was of unknown origin. A considerable quantity of hay, oats and corn was stored in the plant.

Eckman, N. D.—The elevators of the Canton Grain Company and of the Northland Elevator

Company were destroyed by fire which started in the plant of the Canton company on August 10. The aggregate loss was \$25,000.

Bluffton, Ind.—Fire destroyed the building of the Melching Grain Company together with several tons of hay, 600 bushels oats and six horses. The loss of \$1,200 is partly covered by insurance.

Waco, Texas.—A loss of \$15,000 was sustained by the Clement Grain Company when its hay barn, corn shelling plant, together with 150 tons of hay and 15,000 bales of shucks, were burned.

Milton, N. D.—On August 20 fire completely destroyed the elevator operated by E. F. Doran at this place. There was only a small amount of grain in the house. The property was fully covered by insurance.

St. Marys, Ont.—On July 30 fire occurred in the feed mill of the St. Marys Milling Company, Ltd. The loss amounted to \$37,000, fully covered by insurance. The flour mill, elevator, and loading shed were not touched by the fire.

OBITUARY

ADIKES.—Early in the month of September, John Adikes passed away at his home in Jamaica, N. Y. He was an old member of the New York Produce Exchange and had for years been engaged in the jobbing business in grain, feed and hay at Jamaica.

BRADWAY.—James W. Bradway died at his home in Virden, Ill., on August 29. Mr. Bradway had been manager of the Virden Grain Company for the last 15 years. Surviving him are his widow, daughter and son.

CATOR.—Bert O. Cator died from injuries received when he fell into the shaft of his elevator. He was operator and owner of an elevator located at Strafford, Texas.

CLARK.—G. K. Clark, Jr., one of the oldest members of the New York Produce Exchange, died at his home in that city late in August at the age of more than 80 years. Several years ago, when there was a trading pit on the Exchange, he was one of the leading operators. He has not been active in business for several years.

GRAFFT.—Chas. W. Grafft died after a long illness aged 45 years. He was vice-president of the Brooks Elevator Company of Minneapolis. His widow and three children survive him.

HAZELHURST.—Samuel Hazelhurst died recently at Spotswood, N. J., following an operation. He was a member of the Milwaukee Chamber of Commerce since 1911. For more than 30 years he was prominent on the Chicago Board of Trade. He had engaged in grain business in both Milwaukee and Chicago. He is survived by his widow, a son and a daughter.

HENSHAW.—Aged 79 years, Wm. Henshaw died at Atlantic, Iowa. In 1844 he formed a partnership with M. Ringle and operated a grain business at Atlantic as Henshaw & Ringle.

JEFFRIES.—Aged 71 years, Capt. James C. Jeffries died at Helena, Ark. He was for a number of years a feed dealer there.

LEDERER.—Nathan Lederer died on September 1 following a stroke of apoplexy. He was a member of the Chicago Board of Trade for 37 years and had been a leading figure in the cash grain trade on that exchange for many years. His widow, three sons and daughter survive him.

LUPTON.—John Mather Lupton died during the month of August at his home in Mattituck, Long Island, N. Y. He was for years in the seed business, and in 1915 was president of the American Seed Trade Association. His widow, one son and one daughter survive him.

MCCARDLE.—Clyde Albert McCardle died at Detroit, Mich., aged 41 years. He was secretary and treasurer of the McCardle-Black Company of Indianapolis. Further details are given in another portion of this issue.

MOUNTCASTLE.—G. C. Mountcastle died on August 14 at his home in Fort Worth, Texas, at the age of 72 years. He was well known in grain circles of the Southwest and at the time of his death was senior member of the Mountcastle-Merrill Grain Company. He was one of the early members of the Kansas City Board of Trade. Mr. Mountcastle at first was office manager for the C. F. Orthwein Sons Company of Kansas City and when that company dissolved he went with the J. Rosenbaum Grain Company as its southwestern manager. In 1915 he organized the Mountcastle-Merrill Company. He was the first president of the Fort Worth Grain & Cotton Exchange.

PRITCHARD.—Emilio Pritchard of Pritchard & Co., died suddenly at his home in New York City

at the age of 69 years. Mr. Pritchard was well known in grain circles.

STAPLES.—Aged 74 years, William G. Staples died at Racine, Wis., on August 24. He was a pioneer feed and flour merchant of Racine. He retired from active business five years ago.

STOLTZ.—Joseph Stoltz died on August 19 at the age of 65 years. He was for many years general superintendent of the Milwaukee Malting Company and had been a member of the Milwaukee (Mo.), Chamber of Commerce since 1892.

WAIT.—Wilbert Wait died recently at his home in Evanston, Ill. He was a retired grain dealer and resident there for years. He was 89 years old at the time of his death.

WASSINK.—On July 27, aged 41 years, Benj. J. Wassink died at Clymer, N. Y. He had been in the feed business since 1903, and had founded the Wassink Milling Company of which he was senior member when he died. His widow and four children survive him.

YOUNG.—Thos. B. Young died on August 15 following an operation. He had been for many years in the grain business at Morganfield, Ky. Five children survive him.

RECEIPTS AND SHIPMENTS

Following are the receipts and shipments of grain, etc., at the leading terminal markets in the United States for August:

BALTIMORE.—Reported by Jas. B. Heshong, secretary of the Chamber of Commerce:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	4,674,575	6,713,652	3,405,813
Corn, bus..	138,026	590,622	68,971
Oats, bus..	409,180	274,275	38,735
Barley, bus..	78,801	19,510	49,794
Rye, bus..	1,528,056	1,210,832	475,714
Malt, bus..	2,149	55,604	1,600,491
Straw, tons..	98	93	
Millfeed, tons	1,219	1,833	
Hay, tons..	1,508	1,755	
Flour, bbls..	199,948	94,981	37,482

CHICAGO.—Reported by John R. Mauff, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	13,370,000	8,585,000	18,390,000
Corn, bus..	18,810,000	3,721,000	13,295,000
Oats, bus..	16,722,000	10,987,000	2,946,000
Barley, bus..	790,000	519,000	428,000
Rye, bus..	980,000	501,000	1,475,000
Timothy Seed, lbs.	10,849,000	2,347,000	5,228,000
Clover Seed, lbs.	365,000	118,000	528,000
Other Grass Seed, lbs.	3,051,000	595,000	1,051,000
Flax Seed, bus.	130,000	61,000	482,000
Hay, tons..	10,817	6,658	802
Flour, bbls..	1,018,000	562,000	803,000

DULUTH.—Reported by C. F. MacDonald, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	6,655,849	1,237,310	4,245,525
Bonded Wheat, bus.	135,941		
Corn, bus..	195,972		94,629
Oats, bus..	810,548	22,421	422,683
Barley, bus..	1,401,073	237,456	1,000,525
Malt, bus..	1,644		
Rye, bus..	2,955,417	942,959	1,684,540
Flax Seed, bus.	280,005	591,021	246,050
Flour, bbls..	776,950	634,800	856,630

INDIANAPOLIS.—Reported by Wm. H. Howard, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	522,600	1,427,000	418,600
Corn, bus..	1,632,600	3,533,800	1,058,400
Oats, bus..	2,468,000	824,000	2,248,000
Rye, bus..	105,000	106,400	99,400
Flour, bbls..	35,127	21,008	

FORT WILLIAM, ONT.—Reported by E. A. Ursell, statistician of the Board of Grain Commissioners:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	3,235,616	4,852,546	5,754,115
Corn, bus..	2,994	104,170	70,466
Oats, bus..	4,294,307	526,604	6,442,527
Barley, bus..	315,839	301,834	1,056,953
Rye, bus..	267,867	33,562	24,223
Flax Seed, bus.	200,077	128,693	456,422
Mixed Grain, lbs.	2,219,165	538,395	1,265,125

KANSAS CITY.—Reported by E. D. Bigelow, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	16,721,100	8,532,000	10,993,050
Corn, bus..	900,000	345,000	1,568,750
Oats, bus..	1,839,400	899,300	202,500
Barley, bus..	231,000	127,500	83,200
Rye, bus..	62,700	89,100	42,900
Kaffir Corn, bus.	292,600	235,400	233,000
Hay, tons..	14,748	44,052	15,584
Flour, bbls..	118,950	52,000	572,650

LOS ANGELES.—Reported by M. D. Thiebaud, secretary of the Los Angeles Grain Exchange:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, carloads.	279	237	
Corn, carloads..	87	33	
Oats, carloads..	15	16	
Barley, carloads	135	148	
Rye, carloads..	7	1	
Milo and Kaffir Corn, carloads.	60	208	
Hay, carloads..	267	626	
Flour, carloads.	134	71	

MILWAUKEE.—Reported by H. A. Plumb, secretary of the Chamber of Commerce:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	3,251,830	291,600	3,265,289
Corn, bus..	3,892,375	701,100	2,560,663
Oats, bus..	4,090,410	3,316,780	2,271,870
Barley, bus..	1,403,805	437,235	2,681,810
Rye, bus..	512,916	455,735	437,766
Timothy Seed, lbs.	1,359,647	39,318	109,160
Clover Seed, lbs.	564,325		726,168
Malt, bus..	83,240	33,600	649,204
Flax Seed, bus.	258,686	12,831	16,302
Feed, tons..	7,330	4,000	25,241
Hay, tons..	960	864	454
Flour, bbls..	144,820	66,650	85,950

MINNEAPOLIS.—Reported by G. W. Maschke, statistician of the Chamber of Commerce:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	15,119,530	8,087,220	5,705,590
Corn, bus..	530,070	313,020	317,840
Oats, bus..	7,277,690	2,698,720	1,810,370
Barley, bus..	2,170,640	1,343,990	2,072,610
Rye, bus..	768,770	624,920	491,100
Flax Seed, bus.	315,950	286,760	203,270
Hay, tons..	2,029	1,883	94
Flour, bbls..	88,628	51,824	1,678,924

MONTREAL.—Reported by Geo. Hadrill, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	13,081,127	6,699,229	8,269,488
Corn, bus..	7,592,760	150,726	9,406,799
Oats, bus..	2,845,873	597,984	4,342,745
Barley, bus..	1,094,452	218,677	1,540,548
Rye, bus..	2,048,572	206,550	1,218,266
Flax Seed, bus.	25,000	120,797	
Hay, tons..	45,934	11,057	1,963
Flour, sacks.	364,430	110,126	363,835

NEW ORLEANS.—Reported by G. S. Colby, chief grain inspector and weighmaster of the Board of Trade, Ltd.:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..			9,645,896
Corn, bus..			512,354
Oats, bus..			25,040
Barley, bus..			

NEW YORK CITY.—Reported by H. Heinzler, statistician of the Produce Exchange:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	3,448,867		3,272,000
Corn, bus..	456,157		591,000
Oats, bus..	1,304,000		239,000
Barley, bus..	921,609		714,000
Rye, bus..	339,300		148,000

OMAHA.—Reported by F. P. Manchester, secretary of the Grain Exchange:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	5,912,400	4,176,000	6,536,400
Corn, bus..	1,908,200	1,076,600	2,020,200
Oats, bus..	1,356,000	1,478,000	680,000
Barley, bus..	241,200	99,000	135,000
Rye, bus..	364,100	155,100	144,100
Timothy Seed, lbs.			
Clover Seed, lbs.			
Other Grass Seed, bags.	3,196		1,286
Flax Seed, bus.	346,000		
Hay, tons..	9,521		7,290
Flour, bbls..	1,094,755		931,000

PEORIA.—Reported by John R. Lofgren, secretary of the Board of Trade:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	798,420	710,400	328,450
Corn, bus..	1,502,150	1,174,600	521,100
Oats, bus..	1,684,140	1,685,000	604,700
Barley, bus..	51,600	116,200	54,600
Rye, bus..	10,200	91,200	13,200
Malt, bus..			
Flax Seed, bus.	3,440	9,740	13,900
Hay, tons..	330,000	630,000	150,000
Flour, bbls..	239,800	167,900	230,800

ST. LOUIS.—Reported by Eugene Smith, secretary of the Merchants' Exchange:

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	7,160,672	6,754,970	5,382,260
Corn, bus..	2,394,800	1,134,900	1,921,445
Oats, bus..	2,519,000	3,168,000	1,991,080
Barley, bus..	76,922	107,000	21,430
Rye, bus..	57,675	54,089	7,860
Brand & Ship-stuffs sacks	176,910	135,900	224,710
Hay, tons..	9,952	17,868	3,490
Flour, bbls..	720,640	397,740	812,380

September 15, 1921

PHILADELPHIA—Reported by S. S. Daniels, statistician of the Commercial Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus.	2,400,376	2,994,123	1,286,621	2,797,543
Corn, bus.	615,666	72,137	488,571	.....
Oats, bus.	341,502	294,635	.....	.....
Barley, bus.	1,195	.....	.....	.....
Rye, bus.	37,036	17,996	19,421	.....
Flour, bbls.	335,139	250,117	98,494	103,327

SAN FRANCISCO—Reported by A. H. Beyer, statistician of the Chamber of Commerce:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, cts.	57,135	.....	.....	.....
Corn, cts.	8,916	.....	.....	.....
Oats, cts.	9,634	.....	.....	.....
Barley, cts.	2,381,734	.....	.....	.....
Rye, cts.	802	.....	.....	.....
Hay, tons.	9,935	.....	.....	.....
Flour, 1 1/4 sx.	389,181	.....	.....	.....

TOLEDO—Reported by A. Gassaway, secretary of the Produce Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus.	1,066,400	767,900	190,745	67,235
Corn, bus.	230,000	90,050	55,195	56,240
Oats, bus.	2,122,200	645,600	563,135	47,594
Barley, bus.	3,600	6,000	.....	.....
Rye, bus.	250,300	98,200	208,930	38,333
Timothy Seed, lbs.	1,338	408	4,005	22,965
Clover Seed, lbs.	584	144	331	537
Alsike Seed, lbs.	2,261	426	985	73

MINOR MENTION

AN INCREASE of the loading capacity of the elevator of the Texas City Terminal Company has just been made, bringing it up to 18,000 bushels an hour from 12,000 bushels an hour, according to T. R. Hancock, traffic manager of the company. "An expenditure of approximately \$50,000 was made with a view of increasing the grain handling facilities here in order that the Interstate Commerce Commission might be convinced that grain handling facilities at Texas ports are adequate to care for and handle the grain originating in the Panhandle district, and to avoid the necessity of extending to New Orleans a rate equalization incurring an extra haul of 320 miles on the part of the railroads."

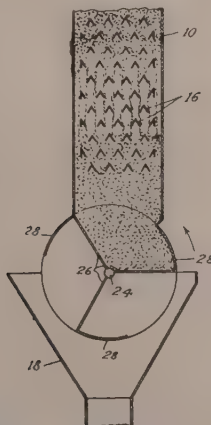
ACCORDING to H. A. Wickstrom, chief grain inspector of the Galveston Cotton Exchange and Board of Trade, the total exports of wheat through this port for the month of August were 15,265,476 bushels. The wheat exports during the same month through the sub-ports of Texas City, just across the bay from Galveston, was 1,607,466 bushels, making a total of 16,872,942 bushels that were cleared through the custom house here. Germany was the largest taker of wheat from Galveston with 3,647,133.20 bushels. Holland came next with 3,148,500 bushels; Italy continued to be a good customer with 2,592,866.40 bushels; United Kingdom ports accounted for 2,395,836.40 bushels of the exports; Belgium took 2,225,505.60 bushels; and France 554,000; South America, seldom a purchaser of wheat from the United States, was credited with 365,999.60 bushels; one cargo of 186,666.40 bushels was sent to Rio de Janeiro, while another cargo of 149,333.20 went to Santos; a single cargo, consisting of 334,033.20 bushels, went to Gibraltar. The Texas City shipments were divided as follows: Portugal, 287,466 bushels; Belgium, 628,000 bushels; England, 40,000 bushels; Holland, 277,000 bushels; France, 181,000 bushels; Italy, 181,000 bushels.

GRAIN TRADE PATENTS

Bearing Date of July 12, 1921

Process of drying granular material.—Clarence W. Carter, Minneapolis, Minn. Filed April 22, 1918. Renewed December 27, 1920. No. 1,384,047. See cut.

Claim: A process of drying granular material which consists in supporting a vertical column of said ma-



terial at its bottom, said column being of a predetermined length, passing heated air through said column throughout the principal part of the length

thereof, periodically withdrawing said support to an extent sufficient to cause the entire column of material to move downward uniformly throughout its cross section, and regulating the intervals of time between each of said withdrawals so that the part of the material which moves past the point of support and is discharged from the column will have been suitably dried.

Bearing Date of July 19, 1921

Grain door fastener.—Charles Wing, Aurora, Ill. Filed September 13, 1920. No. 1,384,794.

Bearing Date of August 2, 1921

Bag-tie.—Charles C. Henderson, Spring Valley, Minn. Filed June 10, 1920. No. 1,386,058.

Bearing Date of August 9, 1921

Grain sieve.—Daniel F. Pehrsson, Buffalo, N. D. Substitute for application No. 97,112, filed May 12, 1916. This application filed December 2, 1919. No. 1,387,306.

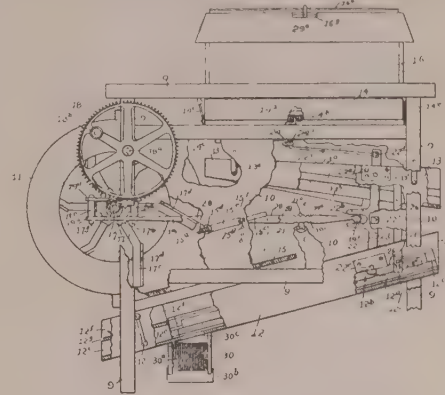
Filled sack sewing apparatus.—Freeland W. Ostrom, Newark, and Irving F. Webb, Elizabeth, N. J. assignors to the Singer Manufacturing Company, a corporation of New Jersey. Filed January 24, 1918. No. 1,387,069.

Grain car door.—George L. McAllister, Omaha, Neb. Filed August 27, 1919. No. 1,387,059.

Seed separator and grader.—William V. Van Etten, Bellingham, Wash. Filed December 26, 1919. No. 1,385,957. See cut.

Claim: In combination, a seed receptacle, means to draw seed from said receptacle in a wide stream,

means to control the volume of said flowing seed, a shakable seed sieve below said receptacle, means to vibrate said sieve rapidly in short arcs, means to change the amplitude of said arcs of vibration, a brush screen mounted above said sieve, means to



cause the front end of said brush screen to vibrate rapidly in an arc of short length and the rear end of the same to vibrate in a plane, said movements timed with those of said sieve but in an opposite direction, and means to change the amplitude of the vibrations of said brush screen.

FIELD SEEDS

The seed warehouse and mill of J. W. Sangster at Listowel, Ont., are to be rebuilt.

The Southern California Seed & Fuel Company at Long Beach, Calif., has been taken over by F. B. Shanks.

The capital stock of the Emery Scott Seed Company of New Albany, Ind., has been increased from \$10,000 to \$50,000.

The capital stock of the Rogers Bros. Seed Company of Chaumont, N. Y., has been increased from \$375,000 to \$500,000.

A seed laboratory is being conducted at Ottawa, Winnipeg, and Calgary by the Dominion Department of Agriculture.

A seed testing and seed cleaning plant are to be established at Delta, Utah, for the J. G. Peppard Seed Company of Kansas City, Mo.

The seed business at Crawfordsville, Ind., formerly conducted as W. R. Paxson has been discontinued, due to the death of Mr. Paxson.

The name of the Card & Powell Seed Company of Louisville, Ky., has been changed to that of the Powell Seed Company. Paul Powell is in charge.

F. C. Metcalf has filed articles of incorporation as the Farmers Grain & Seed Company of Porter, Minn. The capital stock of the firm amounts to \$50,000.

A field and garden seed business is to be conducted at Sherman, Texas, by the Sherman Grain & Seed Company. J. A. Hughes is manager of the company.

S. A. Kerr is now in charge of the seed store of the Bruns Seed Company at Fairfield, Iowa. L. H. Alexander will have charge of the field seed department.

A new seed cleaning plant is being erected at Shelburne, Ont., for H. White & Co., Ltd. It is equipped with a large Monitor and two clipper machines.

A charter under the state laws of Delaware has been granted the Peque Valley Seed Farms, Inc. The company is capitalized at \$50,000. It will sell and grow seeds.

Part interest in the seed business of W. G. Sherman at Sidney, Neb., has been purchased by G. A. Chamber of Lincoln, Neb. Mr. Chamber will make Sidney his headquarters.

The interest of Carl Mangelsdorf in the Atchison Seed & Flower store at Atchison, Kan., has been sold to Ernest Mangelsdorf. Mr. Mangelsdorf has been manager of the company.

The Idaho Seed Company has been organized at Caldwell, Idaho, by F. L. Lilly. He has purchased the warehouse and fixtures formerly owned by the Holt Seed Company and will deal in field seeds and grain.

New quarters are now occupied by the Tobin Seed Company of Kansas City, Mo. Modern machinery for threshing and cleaning field seeds is to be installed. Thomas Tobin is at the head of the company.

Plans are under way by the Adams Seed Company of Decorah, Iowa, for the establishment of chain stores and the placing of local store representatives throughout the country. The company

will inaugurate an extensive mail order campaign, an advertising campaign in farm publications and probably in local newspapers as soon as its retail department is perfected.

A new elevator and office are to be erected at Shenandoah, Iowa, for the A. A. Berry Seed Company. This replaces the seed house which burned. The warehouse will be 40x90 feet, two stories and basement, with elevator storage capacity of 9,000 bushels.

The interest of G. W. Stisser in the Meyer-Stisser Company, seed dealers of Baltimore, Md., has been sold by him to John F. Meyer, a member of the firm. Mr. Stisser, who has been president of the company since it was organized, is going to Germany to engage in business there.

The name of the Four States Seed Company of Clayton, N. M., has been changed to that of the Four States Seed & Grain Company. The company's capital stock has been increased from \$5,000 to \$25,000. Elmer G. Hartner is president; V. L. Baer, secretary-treasurer and general manager.

GERMANY BUYING OUR SEED

With the present swing of trade, it has developed that Germany is making considerable purchases of American seed. During the week ending August 27 about 104,000 pounds of Timothy, 62,697 pounds of Redtop, and 33,000 pounds of Alsike Clover seed were exported from New York and Baltimore to Germany. There arrived during the same week at New York about 264,000 pounds of Red Clover, 66,000 of Alfalfa, 278,000 of orchard grass, 54,000 of rape, 110,000 of canary and 310,000 of Sunflower seed.

SOUTHERN CRIMSON CLOVER SEED MOVEMENT

The Bureau of Markets and Crop Estimates reports a free movement of Crimson Clover seed in the Tennessee Alabama and Maryland producing sections last month, and estimates that only about 10 to 15 per cent of the supply produced is still in growers' hands. Reports indicate that more Crimson Clover seed will be sown in practically all seed-producing sections this year than last year and, with the exception of Tennessee and Alabama, more than normal. A few counties in Tennessee report that a sufficient quantity of imported seed was carried over to meet their 1921 requirements.

NEW MEADOW FESCUE CROP NEARLY SOLD OUT

Approximately 95 per cent of the 1921 crop of meadow fescue seed, estimated at 1,000,000 pounds of clean seed compared with 500,000 pounds produced in 1920, was sold by growers prior to August 20, according to reports received by the Department of Agriculture. The movement this season has been considerably above normal, much of the seed having been bought before harvest. Prices offered to growers recently ranged from 10 to 12 1/2 cents per 100 pounds, basis clean seed. These prices were somewhat lower than those of a week or two previous. The reports relative to the quality of the seed received during the week ending

August 20 confirmed the earlier ones to the effect that the seed would be darker than last year's crop because of rains occurring when the crop was in shock.

CLOVER AT TOLEDO

C. A. King & Co. of Toledo, Ohio, say of Clover seed for week ending September 12:

Clover market has shown firm undertone this week. Official stock of Red Clover in store here September first, 2,858 bags. During August, receipts of Clover were 584 bags, practically all new seed which would leave only 2,274 bags of actual carry-over of old crop. Receipts have been early this season and quality unusually good. Most of the receipts have applied on sales previously made and market has had little fresh hedging pressure. Scattered country buying orders caused rally above \$12. Shortage in October is still concentrated and fresh speculative trade is going into the distant futures. Crop reports continue mixed. Government report about as expected showing acreage 81.9 per cent of 1920 acreage and condition 80.6 per cent of normal. Early movement of seed may break records. Be careful on the bulges.

TIMOTHY SEED PRODUCTION

The Bureau of Crop Estimates indicates a production of Timothy seed approximately 75 per cent of last year, due to reduction in acreages and yield through unfavorable weather. Most growing sections show a decrease in acreage, amounting to 10 to 25 per cent for the United States as a whole, the largest reduction being in southeastern Iowa and northeastern Mississippi, 35 per cent. There was a reduction of 24 per cent in Wisconsin, 34 per cent in Indiana, 35 per cent in central Illinois, 28 per cent in North Dakota. In northeastern Iowa and central and northern Minnesota are the only sections showing acreage increases, 12 per cent, in the former and 5 per cent in the latter district. In both southern Illinois and southern Ohio there are increases of yield as compared to last year, but all other sections show a decrease, the greatest being in northeastern Missouri, central Illinois and in Indiana, where the decrease runs from 19 to 24 per cent of last year.

GENERAL CONDITIONS WILL AFFECT MARKET FOR CLOVER

"Market for Clover is apt to be more two-sided in the future," say Southworth & Co., of Toledo in a recent letter. "General conditions will be a factor in the market and have their effect on seed values. Will lack of carry-over place an enormous burden on the new crop, which is short? If so, will this cause materially higher prices later? Some think so. Will Mr. Farmer be as liberal a seller of Clover as grains, or will he hold for higher prices? Receipts of new Clover increasing. Quality

Prices of \$2.15 to \$2.25 per bushel being paid for rough cured seed during the week ending August 20 averaged 10 to 15 cents less per bushel than during the week ending July 30. The cleaners confirmed the former reports that the quality is inferior to that of last year because of a greater per centage of light-weight seed. In the Missouri district \$2 to \$2.25 per bushel were being offered for the few scattered lots of Kentucky Bluegrass seed remaining unsold. Most of the growers in this district as well as in Kentucky sold their crop freely.

WHERE CLOVER BLOOMS

The Davey Seed Company of Pine River, Minn., has just completed one of the largest and most elaborately equipped seed plants in the state. For the past 12 years, H. I. Davey operated a seed business, specializing in Clover and acclimated seed corn. He was successful to a marked degree but,



H. I. DAVEY

realizing the possibilities of expansion, in June of this year he incorporated the Davey Seed Company, all of the directors being local men, and with the additional capital available there is reasonable expectation that the business of the company will be doubled. The first step was to build a thoroughly modern and well equipped plant, and this has been done as the illustration testifies.

Among the special problems that required attention in the building of the plant was the weather. Now Pine River in January is no place to go looking for strawberries, in fact it is one of the cold-

erate from the basement and deliver automatically to the loading platforms or to cars.

Among the special equipment in the plant may be mentioned two seed cleaners with dust collectors and a complete seed testing laboratory. This latter is in a room 16x30 feet and the equipment is similar to that used by the University of Minnesota. The main office is 16x20 feet in size and is completely furnished with modern appliances of every kind. The stock and display room is twice the size of the office and is attractively equipped.

In writing of his plans for the year and of the seed prospects in the Pine River country, Mr. Davey says: "We are looking forward to a splendid business this year, as there seems to be a good crop of Clover seed in this section and I believe the quality is going to be excellent. The crop has not started to move as yet (August 22), and I know of only one lot of Mammoth that has been hulled. The hulling of Medium will start about the 10th of September and we expect to ship quite a number of cars during the season."

"We are located practically in the heart of a great Clover seed producing section, which part of the country was formerly covered by timber, in fact considerable of it is yet and, as you will note, it is from these sections of the state that the best Clover seed is produced, as the Clover seed produced in those sections which were originally prairie contains considerable foul weed seed, a condition which does not exist in our territory."

CORN BREEDING IS A SPECIALTY

Well-conducted corn breeding requires special methods that farmers generally do not have time to apply, says the Department of Agriculture, in a Farmers' Bulletin. If there is in your locality a corn breeder who demonstrates each year the superiority of his corn, you can afford to pay him well for his superior seed. Five dollars a bushel should prove a profitable price for both parties under ordinary conditions. Such corn breeders are improving various kinds of corn, just as cattle breeders are improving various breeds of live stock by breeding from the most profitable individuals.

The general farmer is a producer rather than a breeder of corn. He profits by the careful work of the corn breeder by adopting the higher yielding strains for his general crop. However, he must remember that all the corn grown from the bushel of purchased seed is not necessarily as good for seed as was the original bushel. Some of it may be better, but much of it is likely to be poorer. Corn is constantly producing variations and mutations, and can be improved thereby or allowed to "run out."

The Department also lists the attributes of good seed corn. To be first class seed must be—

- (1) Well adapted to the climatic and soil conditions where it is to be planted.
- (2) Of a high-yielding variety and from the high-yielding stalks of that variety.
- (3) Well matured and preserved from ripening time 'till planting time in a manner that will retain its full productivity.
- (4) Free from disease and insect injury. Such freedom may indicate resistance to infection.

ANNUAL WHITE SWEET CLOVER SEED

Last fall there was probably little more than 200 bushels of Annual White Sweet Clover seed in existence, practically all grown in Iowa, Michigan, or Alabama, says the *Weekly News Letter* of the Department of Agriculture. Nearly all of this seed was used for increase purposes so that there is at present a considerable acreage growing. There are four or five large producers with acreages in Iowa, Michigan, Ohio, Texas and Alabama, but besides these there are hundreds of farmers with from one to several acres from which they expect to harvest a crop this year, part of which will be offered for sale.

The attention of these smaller growers is called to the fact that buyers will desire to be sure that the seed offered them next winter is that of the annual, and not that of the biennial, White Sweet Clover. The seeds of the two can not be distinguished and it is quite possible that either by accident or design the cheaper seed of the biennial type may be sold for the more expensive annual plant. For this reason the United States Department of Agriculture urges prospective buyers to look carefully into the origin of every lot of seed offered. Growers of annual Sweet Clover seed this year should be able to state where they got their stock seed, when it was seeded, when it blossomed, and when it was harvested. If any responsible state officials can add his assurance that the field is true annual such a statement would be worth getting.

The large growers are naturally preparing to meet all demands for evidence as to the purity of their stocks. Unless the smaller growers can also give adequate assurances regarding the authenticity of their seed it may be harder to sell and they may have to accept prices in line with those paid for common Sweet Clover seed. All such growers

(Field Seeds continued on Page 223)



PLANT OF DAVEY SEED COMPANY, PINE RIVER, MINN.

remains good. Receipts this week 1,807 bags. New York reports imports 410 sacks.

"September Government report shows substantial shortage compared with last year's Clover harvest. This is mostly caused by present low condition. Some think improvement in condition may be shown in report next month. Estimate shows 966,000 bushels against final yield last year of 1,760,000. In 1919 the crop was 1,099,000 bushels. During that year Clover sold at highest prices on record. October range was from \$16.25 to \$32.75, expiring at \$30.50. The big loss this year is due to decreased acreage and drought in many sections."

MOVEMENT OF KENTUCKY SEEDS

The movement of Orchard Grass seed in Kentucky became very active last month and the Department of Agriculture estimates that fully 75 per cent of the crop had been sold before September 1. A uniform price of \$2 per bushel, basis clean seed, which is the same as prevailed shortly after harvest, was paid to Kentucky growers.

The movement of Kentucky Blue Grass seed, however, slowed up during the same period.

est spots in the state, good dry healthy cold, but enough below zero to make the problem of storing potatoes successfully a difficult one. To be sure the climate assures a supply of the best and hardest Clover seed produced, but the seed house had to be built to suit. As a result the building was constructed with Universal Insulite both inside and out, and the outside was covered with green and white marble Kragstone with composition slate shingles on the roof. This practically fireproofs the building from the outside, and as the interior is of the heaviest mill construction with all floors laid in oil, the danger of fire in the plant is remote to say the least.

The new seed house is 44 by 106 feet on the ground plan, three stories high, and with a 10-foot basement protected against frost by hollow tile construction concreted on the inside. The basement contains the steam heating plant, baths and toilets. The first floor is largely used for warehousing heavier products, and contains the Toledo Scale equipment. The second floor is devoted to storage bins, elevators and spouts; and the top floor has racks for drying seed corn, and storage bins. Two heavy chain elevators for potatoes op-

HAY, STRAW AND FEED

The capital stock of Brewer & Co., which operates a wholesale feed business at Olympia, Wash., has been increased from \$15,000 to \$20,000.

The Crescent Flour & Feed Company of Punxsutawney, Pa., has been taken over by J. W. Way, formerly manager of the H. & C. Telephone Company.

The warehouse at Muskogee, Okla., which was formerly occupied by the Atkinson Hay & Feed Company is being remodeled now by Armstrong & Vann.

To manufacture feed, flour and other mill products, Ewart & Lake, Inc., have been incorporated at Groveland Station, N. Y. Its capital stock is \$100,000.

The entire property of the Superior Molasses Hog Feed Company of Clinton, Iowa, has been assigned to J. J. Borman of Lyons, Iowa, for the benefit of its creditors.

The old Chris Miller & Sons' feed store at Louisville, Ky., which was occupied by the Kentucky Feed & Grain Company has been taken over by George Riedling.

W. M. Nichles, G. F. Holt and S. S. Dudley have filed articles of incorporation at Rockwall, Texas, as the Rockwall Feed & Fuel Company. Its capital stock is \$5,000.

A store is to be opened at Elgin, Ill., by the Basic Feed Company which has for some time been operating a large mail order business. Frank D. Rogers will have charge.

A feed business has been opened at Watertown, N. Y., by M. A. Donner. He will operate under his own name. Mr. Donner is well known in the feed and grain business at Buffalo.

Alex Dickey, conducting a wholesale and retail feed and flour business at Mulberry, Kan., has sold out to Harvey Sexton and John Popin. The new owners will continue the business.

Fay Parsons is now in charge of the feed department of the Samuel Knighton & Son, New York City. He was for years connected with various feed jobbing concerns in Minneapolis.

A feed and flour business has been started at Woonsocket, S. D., by Brown & Parsons. A. F. Parsons formerly operated an elevator at Woonsocket but lately has been selling flour.

Neil D. Callanan, William J. Callanan have incorporated at Buffalo, N. Y., as the Callanan Bros. The company will conduct a general feed merchandising, commission and brokerage business.

A line of feed, flour, and poultry and stock remedies is to be carried by the Priest River Grain Company of Priest River, Idaho. It is a branch of the Coeur d'Alene Grain & Milling Company.

The Creston Flour & Feed Company of Creston, Iowa, has been taken over by Arthur J. Nord, formerly with the Interstate Flour & Feed Company and the Bergman Millfeed Company, and his brother.

The feed mill at Grundy Center, Iowa, formerly owned by John Leffler has been taken over by the Co-operative Elevator Company. Mr. Leffler recently purchased the plant from the Fuller Lumber Company.

The Rochester Feed Store, owned by Wm. Garner, Wm. Kennell and C. Garner has purchased the Chas. Reed feed business at Rochester, Ind. The company will handle feed, flour, hay, straw and stock and poultry feeds.

A partnership has been formed at Piggott, Ark., to handle feed, flour, and other farm products. The company will be known as the Walker-Robbins Produce Company. J. M. Walker, N. B. Robbins and Roy Robbins are interested.

A feed business is to be conducted at Minneapolis, Minn., by O. C. Jacobsen under the name of the Standard Flour & Feed Company. He was formerly with H. Wehman & Co., and was later secretary and treasurer of the Newsome Feed Company of Minneapolis.

J. A. Sturges & Co., and Prentiss Brooks & Co., of Easthampton, Mass., have consolidated as J. A. Sturges & Co. They are both well known feed companies. The former Prentiss Brooks' store will be discontinued; the main store and office will be at the Sturges' store. Merton S. Clark will have charge of the mill. J. A. Sturges, Miss Frances M. Curran and Merton Clark are interested.

TIMOTHY SELLS HIGHER

In a recent market letter, Albert Miller & Co. say: Active demand for all kinds of feeding hay. Settlement of the building trades strike already instilling new life into feed trade. Resumption of

building putting hundreds of idle teams to work. As work is resumed the demand for hay will no doubt materially increase. Keep your hay moving to Chicago and take advantage of these coming favorable conditions.

HAY MARKET AT ST. LOUIS

BY S. F. LARRIMORE

Receipts of hay at St. Louis during the past week (September 9) have been moderate, and show a tendency of decreasing. Offerings consist of Timothy and Clover mixed in moderate amount, with liberal receipts of Alfalfa and moderate receipts of Prairie were unchanged to 50 cents lower. Timment with some Alfalfa in demand and inquiries being made for supplies. The prospects are that we will have a very good market between now and the first of the year, although high values are hardly to be looked for.

HAY AT KANSAS CITY

BY B. S. BROWN

May receipts continued small at Kansas City the first week in September, but there was a moderate improvement in trade conditions and a somewhat better feeling prevails than for some time. Prices showed some irregularity, with the bulk of the quotations about steady. Increased offerings of Alfalfa depressed prices \$1 to \$3 a ton. All grades of Prairie were unchanged to 50 cents lower. Timothy was in good demand and advanced \$1.50 to \$2.50, while all grades of new Clover Mixed were up about \$2. Clover was steady.

High freight rates which limit shipments and keep the more distant buyers from the market continue the main factors in keeping trade smaller than at the corresponding time in other seasons. The fact that grain rates have been reduced in numerous instances and that there is widespread agitation for general freight reductions has aroused expectations of improved transportation conditions in the near future, though there is no indication yet as to when or how it will come. As a rule prices at terminal markets are still too low to attract distant shipments.

Receipts of hay at Kansas City in August were 1,229 cars, compared with 3,671 cars in August, 1920, and a 10-year average of 2,798 cars. In the same month of 1919 arrivals were 4,034 cars. The bulk of the hay at present is Alfalfa and Prairie and is coming from nearby points. Some dealers expect an enlarged movement in the near future. Low prices of coarse grains, mill feed and the generally good condition of pastures are tending to restrict demand.

ALFALFA MARKETING PROBLEMS

There are several difficult problems in connection with the profitable marketing of the Alfalfa hay grown in the irrigated areas in the Southwest, say specialists of the Bureau of Markets and Crop Estimates.

The first step which has a direct bearing upon the marketing of Alfalfa is baling. The rainfall in the Southwest is exceedingly light during the hay-making season, and for this reason much of the hay is baled out of the windrow or cock. When hay is baled from the windrow in sufficiently green state to save all the leaves it can not be pressed tightly, because of the danger of heating, and shippers, therefore, frequently experience considerable difficulty in loading cars with the minimum weight for which they pay charges. Hay which has been stacked and allowed to dry can be baled more compactly, but in baling stack hay many of the leaves shatter because of the dryness. According to the application by many inspectors of the present grade rules, this hay is of a lower grade than when the leaves cling to the stems, notwithstanding the fact that the leaves may be contained in the bale.

Bleached hay, together with weeds, causes considerable trouble in marketing Alfalfa. It is well known that Alfalfa hay bleaches quickly when exposed to bright sunlight, but there is a wide dif-

ference of opinion as to just the amount of nutrient that is lost in bleaching. Commercial grade rules, however, are based in part upon this factor. Producers and shippers in these sections contend that too much weight is given the color factor in the present commercial grades for Alfalfa and not sufficient weight to its feeding value.

From investigations recently made by the Bureau of Markets and Crops Estimates it appears that when the present grading rules are rigidly and technically applied, as is frequently the case on declining markets, it is impossible under the most ideal conditions to produce "choice" grades Alfalfa. The presence of a weed, a blade of grass, or of a bleached stem will prevent a bale from grading "choice," and it is practically impossible to obtain hay which is entirely clear of any of these things. Considerable hay is bought and sold on this grade, however, but the use of it, and sometimes also of the grade No. 1, causes the shipper a heavy loss.

The specialists believe that commercial grades for any kind of hay should be made so that physical limitations in production and preparation will be properly recognized, and that such grades should be uniformly applied, and not influenced whatever by the state of the market.

Many of the irrigated sections of the Southwest do not ship more than from 2,000 to 3,000 cars of hay each year and this business is in some instances divided between two or three shippers, who also conduct other businesses in connection, thus greatly reducing overhead expenses. Cooperative shipping associations are being organized in several of these projects. The cure for the present marketing difficulties in the Alfalfa sections of the Southwest would seem to be along the line of better standards and their impartial applications, say the marketing specialists.

NEW FEED BRANDS

"FIT FOR ALL" stock feed. Temtor Corn & Fruit Products Company, St. Louis, Mo. and South

Fit for all

Fort Smith, Ark. Filed April 11, 1921. Serial No. 146,044. Published August 2, 1921.

Registered Trademarks

145,435. Dairy feed composed of unbolted cornmeal, Alfalfa meal, wheat bran, cotton seed meal and molasses. Pease & Dwyer Company, Memphis, Tenn. Filed January 21, 1921. Serial No. 142,525. Published April 26, 1921. Registered August 2, 1921.

145,392. Dairy feed. Josey Miller Company, Beaumont, Texas. Filed December 1, 1920. Serial No. 140,495. Published May 3, 1921. Registered August 2, 1921.

145,051. Horse and mule feed. The Buckeye Cotton Oil Company, Cincinnati, Ohio. Filed January 31, 1921. Serial No. 142,954. Published April 2, 1921. Registered July 26, 1921.

145,091. Scratch feed. J. M. Ernst & Son, Arcola and East St. Louis, Ill. Filed February 4, 1921. Serial No. 143,164. Published April 12, 1921. Registered July 26, 1921.

NEW YORK HAY PRICES LOWER

BY C. K. TRAFTON

Frequently during the month narrowness was the conspicuous feature in the hay market. While it is true there has been a weaker undertone with prices down to a slightly lower plane there has been no great depression unless it was in inferior grades in small bales. As a matter of fact choice Timothy in large bales, No. 2 to No. 1, has only weakened in a small way and this simply represented the transition from the old to the new crop basis. Speaking broadly, the action of the market was to a great extent a source of disappointment to practically everyone concerned. It is conceivable that those dealers who can use common grades in small bales were satisfied with the break because they have declined about as much as generally anticipated by buyers, but on the other hand, superior descriptions in big bales have not fallen as far as many buyers had forecast.

It was, of course, plainly evident that almost all farmers were selling their poor grades in a moderate way but were holding back their top grades, being dissatisfied with current bids. Advices from reliable sources in the interior suggest that a good many farmers were not willing to sell except in a limited fashion, claiming that it was not profitable. Consequently it was asserted that many of them had expressed their determination to "cover up" their old hay. This in a sense confirms claims that there was still a moderate supply of old in reserve.

This is, of course, partly counterbalanced by the meagre crop this season, only 81,600,000 tons of tame against 108,233,000 tons, tame and wild last season. Roughly one of the principal fundamental reasons for the inactivity has been the great hindrance or general dissatisfaction created by the almost universal apathy growing out of the popular belief or expectation that it was high time that

A	ALFALFA	A
L	We are the Largest Distributors	L
F	of ALFALFA in	F
A	GREATER NEW YORK	A
L	Shippers who have Alfalfa Hay to dispose of, if they will	L
F	communicate with us we will provide a satisfactory outlet.	F
A	ALFALFA	A
L	A. W. D. Power & Co.,	L
F	12-15 N. Y. Hay Exchange	F
A	NEW YORK	A

freight rates were lowered closer to a normal or pre-war basis.

It is true there have been reductions in some cases, but needless to say the roads declare they are not in a position to make important or general cuts chiefly on the ground that wages are still too high. On the one hand, farmers or country shippers declare that in many instances when they ship via rail they receive little money back because the freight consumes virtually all their expected profit. This is, of course, notably true anent inferior grades owing to the fact that it almost always is impossible to sell poor grades or trash excepting at big discounts.

As frequently stated in these reviews it is decidedly poor policy to send poor stuff to this market. Invariably buyers here insist that they do not want inferior even at huge discounts, and consequently it has to be sold at a big sacrifice, and as a result the shipper receives virtually nothing after freight charges are deducted. Naturally, therefore, it would be much wiser to feed such hay on the farm or throw it on the manure pile, especially if it is not positively sound.

Evidently the future course of the market depends on the question of endurance. In a word, it is fair to presume that the buyer will hold back and buy in a small way only on the assumption that prices will go lower after freight rates are lowered. In the opinion of railroad men this cannot occur until wages come down. In the meantime local stocks are represented to be meagre.

MARKET SITUATION OF JOHNSON GRASS HAY

In certain sections of the Southern States Johnson grass hay is handled commercially to a considerable extent and is considered equal to Timothy. A survey of the market situation of Johnson grass hay just completed by the U. S. Bureau of Markets and Crop Estimates in the principal surplus producing states, including Alabama, Mississippi, Arkansas, Louisiana and Texas, indicates that the amount of this kind of hay to be marketed during the present year will be slightly less than last year.

A very small percentage, probably not over 15 per cent, in Texas and Mississippi and 20 per cent in Alabama has been marketed to date. This is not unusual as the crop is usually marketed during the fall and winter months. There are several causes, however, which are having considerable influence upon the demand at present. The mines and sawmills which use Johnson hay extensively when the plants are in operation are now practical-

ly out of the market, as many of them are shut down and the horses and mules have been turned out to pasture. The same financial and industrial depression which has caused the mills and mines to close down is curtailing the demand from other sources, so that at present the demand is very poor.

The average price of No. 1 Johnson grass f. o. b. cars at shipping points is about \$8 per ton in Texas, \$10 in Mississippi, and \$12 in Alabama. The prices in local consuming markets in each of the states range from \$4 to \$5 over shipping point prices, which is approximately the amount of the local freight rate.

SEEK NEW PLANTS FOR WESTERN BUNCH-GRASS RANGES

Overgrazing has injured or destroyed much natural bunch-grass pasture, a fact which draws attention to the radical difference in this respect between bunch grasses and creeping grasses, says the Department of Agriculture in a recent bulletin. The work of cattlemen having lands under fence and, in addition, the work on the national forests has shown that the original carrying capacity of the ranges can be restored by a proper system of grazing, say the specialists in the United States Department of Agriculture. These specialists declare that the fence alone—that is, the control of the land—will solve the Western range problem so far as maintaining its normal carrying capacity.

Beyond what control can do, however, there are large possibilities in finding other grasses and legumes which, when introduced, will spread of their own accord and make more pasture than the native. The basis for this belief is found in the lowlands of California, now composed mainly of grasses and other plants introduced from the Mediterranean regions, which supply at least 80 per cent of the total pasturage. These introduced plants have proved far more aggressive than the native ones.

Practically all the pasture grasses of the north-eastern quarter of the country, also, have been introduced there, including Blue Grass, White Clover, Redtop, Timothy, Canada Blue Grass, and many others. In the South, likewise, the most valuable pasture grasses are introduced, such as Bermuda, carpet, Dallis grasses, Japan Clover and Bur Clover.

"These grasses must be sought in Asia, where almost every condition that exists in our bunch-grass range lands is duplicated," said one of the specialists in the Bureau of Plant Industry. "Asia is very rich in grasses and legumes. It has been impossible to obtain seeds without going after

them, because there are no experiment stations there."

Incidentally, the specialists mention two aggressive Asiatic plants, neither of them very desirable, the Russian thistle and the rosy saltbush. Despite the undesirability of the Russian thistle and the additional fact that it is an outlaw in some states, it is safe to say it is more of an asset than a liability to some sections of the West. On many of the drier range lands this thistle makes up a very large percentage of the available feed, both for pasturage and for preserving as winter feed. Indeed in some regions of the Middle West the farmers have for years been saving Russian thistle for winter feeding, stacking it with as much care as might be given to any other forage.

A STUDY OF THE FEED SITUATION

The following survey and study of the present feed situation was recently prepared by W. E. Suits of the Quaker Oats Company, Chicago, Ill. It constitutes an excellent record of the disastrous year just past, and resume of present conditions and future prospects. Every handler of feeds should read it. He will have a clearer conception of the present situation and a better idea of next winter's possibilities. Mr. Suits says:

A review of the history of the feed manufacturing and marketing situation during the past 12 months would be neither pleasant nor profitable but for the purpose of showing the comparison which exists today.

It was in August of last year that we began to appreciate that we were facing conditions decidedly unusual, though most of us had no realization of the full extent of what did happen. As the months progressed we suffered from cancellation after cancellation of bookings which had been previously covered. This was accompanied by a practical inability to market either the manufactured products or the raw materials, so that by the first of January feed manufacturers and dealers were compelled to contribute many millions of dollars toward the restoration of normal market conditions in writing down their inventories.

All through the past 12 months a large proportion of the retail dealers have carried heavy loads of high-priced stock on which to accept the full market shrinkage would have meant bankruptcy to them. Last year's crops were about the most bountiful that the country ever raised. The heavy crops of grain were distributed with unusual uniformity throughout the country. The oats crop alone was over 1,500,000,000 bushels, the largest and one of the best crops in history. The pastures of the East,

1874

PIONEERS

1921

We furnish cash grain market service to country shippers from branch offices and correspondent offices connected with Chicago by leased wires. This plan gives shippers in small towns the same service enjoyed by dealers in cities and terminal markets. This policy is now generally recognized as

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The cost to you is no more than other houses charge. We have special cash grain salesmen who do not execute orders for future delivery, but who give all of their attention to their particular grain.

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Harry J. Rogers, Corn

Frank J. Dolan, Oats

LAMSON BROS. & CO.

GRAIN COMMISSION MERCHANTS

No. 6 BOARD OF TRADE

∴

∴

CHICAGO

the biggest dairy feed buying section, were green and productive in many cases right through from May till snowfall.

The country produced an enormous quantity of cotton and, consequently, cottonseed meal, and owing to the limited demand abroad as well as at home there proved to be a burdensome surplus. Linseed meal was in practically the same position, gluten feed frequently selling at the price of corn or less.

Like everything else, under the pressure of war-time demands the dairy industry increased its output enormously. The reduction of the export demand resulted in accumulations of tremendous quantities of these products, particularly condensed milk, and at about this time last year most of the condensed milk factories stopped buying milk and the price of milk declined to a basis unprofitable to the producer. As a result the dairyman was not interested in increasing or even maintaining his output. Theoretically, it is profitable for the feeder to sell his home-grown grain and replace it with manufactured feeds, but under conditions such as these the feeder failed to follow this policy; he fed what he had, possibly supplementing it with purchase of the low-cost, high protein concentrates, and let it go at that.

Now, how does it look today? We have just gone through two months or more of the worst drouth in recent years, accompanied by the highest averages temperature over a period of so long a time within the memory of most of us. This condition has apparently ruled all over the North Temperate Zone. We all know that when the world is visited by such a calamity as the Chicago fire and the San Francisco earthquake it has a pronounced effect upon the financial and industrial conditions of the whole world; and if the pastures and a large percentage of the grain crops are burned up, as they have been during recent months, that fact cannot help making an enormous impression upon the foodstuffs situation throughout the world.

Last year the greatest single competitor which the manufactured feedstuffs had was oats. Oats were most plentiful everywhere. Practically every dairyman had an unusual quantity of oats either on his own place or easily obtainable from a nearby neighbor. These were universally ground and fed to cattle.

This year we have raised, according to the Government estimate of August 1, 1,137,000,000 bushels of oats whereas the output last year was 1,526,000,000 bushels. The crop last year showed a heavy test. The oats this year are the poorest on record, most of them testing from 18 to 25 pounds per bushel, and in feeding value probably not to exceed 75 per cent of an equal quantity of last year's oats. The effect of this is to reduce the feed value of this year's oats crop to equal 800,000,000 or 900,000,000 bushels of last year's oats, a shortage of 10 or 11,000,000 tons. In the big feed purchasing states of New York and Pennsylvania the oats shortage as compared with last year is about 400,000 tons, and if they are 25 per cent less valuable, the feed shortage, due to the reduced quantity and quality of oats, will be equal to about 500,000 tons in these two states alone.

The cotton crop shows an enormous shrinkage as compared with last year and from my advices it would seem that there will be produced about 500,000 tons of cottonseed meal and cake less than was produced last year. It likewise would seem that the total production this year is about a quarter of a million tons less than our 10-year average consumption. The Government estimate of the flaxseed crop is 2,100,000 bushels below last year, 20 per cent reduction. A great deal of the flaxseed comes from the Argentine, and the reports indicate that they have put in a much smaller acreage.

The export requirements will doubtless be very heavy on these seed meals, as it is a well-known fact that the continent of Europe and the British islands have suffered as severely, if not more so, from the drouth as we have, and one of their needs which will be first satisfied will be the high protein concentrates, as they are especially needed to be fed with the low feed value grains produced during the drouthy summer. Following all this is the fact that the hay crop of the United States is about 10,000,000 tons short of last year.

During the next month or two there will be the customary feeding of home-grown grains, especially the local oats, but the feeders will find that their value is so low that supplementary feeds must be fed liberally. They will likewise be compelled to feed the light oats prodigally. They will doubtless exhaust their local supplies much earlier than usual.

In view of the various shortages here and abroad, and the fact that there is no such accumulation of dairy and other food products as existed a year ago, it seems inevitable that the manufacturer of compounded feeds will have another opportunity this fall and winter to show the necessity for his existence and the benefits which he can bestow upon the world by utilizing the many materials which otherwise might not be available to the feeders and turning them into high-class, substantial feeds to supplement the grain crops.

COAL

NORMAL ANNUAL INCREASE IN COAL DEMAND

Writing in a recent issue of the *Coal Review*, Edwin S. Bonnett observes that although production is now at low ebb, our normal annual increase in coal demand for the last 20 years has been between 10,000,000 and 20,000,000 tons. If this continues, Mr. Bonnett asserts it will only be a short time before it will force production to exceed even the record output of 1918, which was 579,386,000 tons.

HOOVER SUGGESTS COAL INSPECTION

In order that standards of American coal shipped to foreign countries may be maintained at a high level, Secretary of Commerce Hoover has held conferences recently with large coal exporters relative to a possible voluntary inspection system. Mr. Hoover has proposed that something similar to the grain inspection system be worked out by which the quality of coal shipped overseas be definitely indicated and kept at a high grade.

Reports of agents of the Department of Commerce from France and other European countries have indicated a disappointment in some cases on the part of purchasers of American coal. It has been stated that American coal exporters were not thoroughly familiar with the needs and desires of purchasers in other countries and that this situation has tended at times to affect American export trade adversely. It is Mr. Hoover's idea that if some sort of an inspection system can be established it will be in the interest of all coal exporters and especially of American export trade in general. We have established a good export business in coal and this is an excellent suggestion for keeping part of it at least. In coal as in other products we must please the buyer, not ourselves.

CORN WILL NOT REPLACE COAL

There has been considerable talk lately from certain corn producing sections on the possibility that growers will find it more economical to use their corn for fuel rather than sell at prevailing prices. The possibility of such action, viewed from a dollars and cents standpoint, is not to be considered seriously at this time.

In Iowa, where some of the "corn for fuel" talk originated, the State College experts have investigated the subject and announce that even at the lowest price reached this summer corn would not be a cheap fuel. They say coal will have to go much higher or corn become almost valueless before it will pay to burn the latter. They base their belief on experimental work carried on by the engineering experiment station in which corn was analyzed in comparison with coal of heating qualities.

The engineering experiment station in its laboratories found that Iowa coal which generally sells around \$10 per ton would have to sell at \$20 per ton before it would begin to pay to burn corn worth 47 cents for a 75-pound bushel. They also found that corn is a poor burner, acting like green cordwood and requiring a lot of attention in firing.

COAL PRODUCTION

In its weekly report, under date of September 3, the Geological Survey, Department of Agriculture said that the total output of soft coal the week ended August 27 is estimated at 7,755,000 net tons as against 7,771,000 and 7,713,000 tons in the weeks of August 13 and 20, respectively. Current production is 13 per cent below the 1914 rate, when there was a period of industrial depression, and 31 per cent below the 1920 rate.

"The all-rail movement of soft coal to New England declined during the week ended August 27," the Survey said, "when, according to American Railway Association reports, 2,670 cars were forwarded over the Hudson. Compared with the week before, this was a decrease of 312 cars. Anthracite shipments totaled 2,475 cars against 2,460 cars in the preceding week.

"Shipments of soft coal from the lower lake ports increased somewhat during the week ended August 28. Total dumpings—712,064 net tons—exceeded those in any week since the last week in July. Of the total dumped, 686,620 tons were cargo coal and 25,444 tons vessel fuel.

"Cumulative movement for the season to date stands at 161,150,110 net tons. Thus, because of the heavy movement early in the season, the present year remains ahead of 1919 and 1920, but owing to the slump during August, 1921, is now nearly three quarters of a million tons behind 1918. This is serious.

"The extent of the depression in export business

which began with the settlement of the British Miners' Strike may be measured by reports from the three coal exchanges at Hampton Roads which handle by far the greater part of the overseas exports of bituminous coal. The total dumped during the week ended August 27 was 83,628 net tons and was but 18.5 per cent of the average weekly rate attained in June when foreign demand was at its height. Of the total dumpings, 42,748 tons were destined for exports and 40,880 were used for foreign bunkers."

COAL RATES UNREASONABLE

In a decision on the Illinois coal complaints which assailed as unjustly discriminatory the rates on bituminous coal from mines in the Fulton, Peoria, Third Vein, Springfield and Belleville districts and from the so-called inner group in Illinois to destinations in Illinois, Indiana, Iowa, Minnesota, Wisconsin, Michigan, Nebraska, Kansas, North Dakota, South Dakota and Missouri the Interstate Commerce Commission has held that the rate from the Third Vein, Springfield and Belleville districts to the Northwest are unduly prejudicial to the extent that they are less than 70 cents, 30 cents and 10 cents lower a ton, respectively, than the rates from the southern Illinois district to the same territory.

The Commission held that the rates from the Fulton-Peoria district to certain points in Iowa are unduly prejudicial to the extent that they are less than 70 cents and 40 cents lower a ton than rates from the southern Illinois and Springfield districts, respectively, to the same destinations. The rates from the mines in the inner group to St. Louis and points in Minnesota and southern Iowa, except Missouri River cities, to which the traffic moves through St. Louis, are unduly prejudicial to the extent that they are less than 22.5 cents lower a ton than the rates maintained from mines in the southern Illinois group to the same destinations, which is too narrow a margin the Commission held. This will make considerable difference to the coal merchants and the consumers in the territories affected by the decision.

COAL RATES UNREASONABLE

The *Black Diamond*, for more than 30 years the leading paper in the coal industry, in reviewing the coal markets for the week ending September 10, said:

Conditions in the coal trade have changed but little during the past week. Fluctuations in demand have been noted in certain markets, but these have been offset by lessening in demand in others, so that from a national viewpoint the industry remains in a comparatively even depreciation.

Here and there the trade sees a brighter outlook in the situation as a result of slight improvement in industrial activities, with a consequent expectation of an increase in demand for steam coal. In other markets conditions are as dull as they have been during the past few weeks, with the trade looking forward to cold weather as the only immediate source of revival.

So far, the retail consumer has shown little interest in stocking for future requirements. It is true that there is a percentage of householders who have stored coal, but indications are that this is below the normal for the past few years. Where the industrial depression has not resulted in financial difficulties which prevented the domestic consumer from buying, the will-o'-the-wisp, hope that freight rates would be reduced have been sufficient to deter buying.

The result is that production has been held down in all coal fields, with the exception of anthracite, and the trade fears temporary difficulties in satisfying any emergency demand which the householder might place upon it.

Eastern markets on the whole show little change in the demand for steam coal. In Boston the trade was extremely dull while in New York and Philadelphia buying was moderate in the extreme and prices show no tendency to strengthen.

Pittsburgh saw a little better buying on both steam and domestic bituminous, due to slight industrial improvement, but this was not sufficient to affect prices.

The export situation remains static with practically no call for American coal abroad. The trade accepts the situation as inevitable in view of the present British subsidy on coal. But as that is shortly due to expire it is believed the American exporter will find a market abroad soon, which will not tend materially to relieve his present difficulties.

Because of the export situation and the cur-

tailment of shipments to the lake, to say nothing of the disturbances in Boone, Logan and other counties. West Virginia production was at low ebb during the week with probably a 35 per cent output representing an average for the entire state. More mines were closed either because of market conditions or labor troubles and prices, particularly on steam sizes, continued weak. Screenings were moved in many cases below the cost of production and even domestic sizes were being thrown into western markets at a sacrifice.

The situation in Ohio continues one of extreme depression although Cleveland reports a better feeling in the trade as a result of somewhat better activities among the industries. Cincinnati also saw a little better call for coal but it was not sufficiently great to affect prices favorably.

Indiana is still confronted with labor troubles in Sullivan and Greene Counties and with a weak demand for the outputs of this state production was hovering around 25 or 30 per cent of normal. Prices, as in other fields, were extremely weak.

The Chicago market was dull on both steam and domestic with even the call for anthracite being moderate. Production for the state range between thirty-five and forty per cent with steam sizes

being the greatest factor in holding down improvement.

In the Northwest, where winter has a way of sending his advance notices early, there was a better call for coal from the interior tending to relieve the docks which are so overcrowded that it is almost impossible to unload arriving cargoes.

All in all, the trade is attempting to convince itself that the bottom, which it thought it had reached several times before, has finally been touched. Believing that the market cannot grow worse, it has resorted to Pandora's box and has taken hope unto itself that improvements will soon arrive.

Capitalized at \$250,000, the Independent Coal Company has been incorporated at Denver, Colo. E. O. Schmidt, A. A. Walker and J. H. Jackson are interested.

To conduct a coal business at Stoughton, Mass., the Murphy Coal Company has been incorporated. Chas. E. Murphy is president and Cornelius Murphy, treasurer.

The new coal yards of the Sunset Fuel & Grain Company at Houston, Texas, are in operation. The

yards occupy an entire block and is located on two railroads. They are equipped with auto and wagon dumps.

H. D. Palmer, and J. S. Riggs have incorporated at Cleveland, Ohio, as the B. C. Tucker Coal Company. Its capital stock is \$10,000.

The coal business of the Anthony Salt Company at Anthony, Kan., has been taken over by the Farmers Co-operative Elevator Company.

The coal and feed business conducted at Blue Mound, Kan., by Stephen Balyeat has been purchased by A. J. Allison. He will continue the business.

The coal business of R. Haughenberry at Mercer, Mo., has been purchased by the Alley Grain Company of Mercer. The company will handle coal, feed and flour.

The produce business of R. J. Leuders at Columbus, Wis., has been taken over by Guy V. Dering who has been in the feed, grain and coal business there for some time.

The Evans Coal Company has been incorporated in Jefferson County, Ala., with J. L. Drennen, president and treasurer; Walter Evans, vice-president and W. O. Lanning, secretary.

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FIELD SEEDS

(Continued from Page 218)

are advised to take up this matter with their farm bureaus, county agents, or state experimental stations and protect themselves so far as possible.

NEW YORK SEED PRICES GENERALLY HIGHER

BY C. K. TRAFTON

During the month under review there was no general animation in the local market for field seeds, although a fairly good business was reported in a few seasonable varieties. In a few cases prices show fractional declines in comparison with a month ago, but substantial advances were recorded on those varieties of which the crops were short, notably Kentucky Bluegrass which is about 6 cents higher. Canadian Bluegrass, Redtop and White Clover gained about 3 cents; Orchard Grass, 2 cents; Crimson Clover, $1\frac{1}{2}$ cents; and Sweet Clover, 1 cent.

The customary early fall dealings are reported in Red Clover and prices have remained without change of moment. An unusual situation is that the domestic seed is available at lower prices than imported, which has advanced sharply, offerings from France being extremely light and generally at about 27 cents c.i.f. New York. Italy is said to have a little for export, but it will probably go to France or Germany, possibly at equivalent to 25 cents. A late cable from Germany stated that the crop of medium Red Clover was extremely short and none will be exported, although it was not made clear whether or not this was an official restriction.

The statement in our August review regarding purchases in Chile was confirmed by moderate arrivals during the past month, about 730 bags. Some of these lots were said to be of choice quality, while others contained too much large dodder to pass the import examiners, and hence were re-shipped to the United Kingdom. Additional arrivals are expected in the near future, although this business has now ceased, evidently owing to exhaustion of supplies in Chile.

A fairly good business has been done in Alfalfa and prices have undergone no important changes. Arrivals during August and early September were much smaller, totalling 3,107 bags, against 5,187 during July. As practically all the arrivals went directly to the West, seaboard stocks have remained small. Moreover, the domestic crop is late and it is expected that when it does move it will meet with a good eastern demand as the bulk of the best quality seed seems to have been cleaned up in Argentina. Shippers there are quoting 15 cents c.i.f. New York on letter of credit basis, which makes it hard to do business as most dealers want to see the seed before opening a letter of credit. France is not offering freely even at 17 or 18 cents and Italy has none to offer under 17 cents. Moreover, the European seed is said to be inferior to the South American, containing too much buckhorn.

There has been a good southern demand for Crimson Clover and prices have advanced owing to the short domestic crop and the lack of foreign offers. New crop seed has sold at 9@10 cents in a large way and $9\frac{1}{2}$ @ $10\frac{1}{2}$ cents in small lots. Arrivals during the month were smaller, about 1,650 bags, against 1,730 in July. According to well-informed importers, American dealers cannot seem to believe how seriously the European crops were damaged by the great drouth. Nor do they seem to appreciate the fact that American bids are below the prices that German dealers are paying for their own seed. It is said that England is buying

French Red Clover and Crimson Clover very freely at much higher prices than we are willing to pay.

The advance in White Clover has been due to a brisk demand from the West owing to the short crop in Wisconsin. Moreover, arrivals from Germany continued small; only about 165 bags during the month. According to conservative importers, the German seed is superior to the domestic in many cases, but the western trade seems decidedly skeptical about this.

There has been a good demand for Orchard Grass and because of the crop shortage prices have advanced in the face of much heavier arrivals, chiefly from Denmark, the month's total being 4,608 bags, against 1,100 in July.

Hairy Vetch has advanced to 9@ $9\frac{1}{2}$ cents on the spot, as demand has been good and latest advices are that exports have been prohibited from Czechoslovakia and adjacent territory. Still, the month's imports were larger: 663 bags, against 170 in July.

Rapeseed has been easier owing to much larger arrivals from Holland and France, about 1,071 bags for the month, against 375 bags during July. Moreover, the countries mentioned have been more eager to sell at much lower prices, Holland quoting 4.75 cents against $6\frac{1}{2}$ cents a month ago, and France at 5 cents, against about 6.30 cents in July.

The arrivals of Argentine Sunflower seed were decidedly large during August and early September, roughly 15,550 bags, but as demand has been good prices have been well maintained. Old crop domestic seed has been well cleaned up and the remainder is in strong hands. New crop is selling at $5\frac{1}{2}$ cents, while Argentine on spot is quoted at 4 cents.

Total arrivals of Red Clover during the month were about 3,300 bags, against 4,050 in July. Arrivals of Rye Grass were 540 bags, against 268 in July. Arrivals of Argentine Canary seed were about 990 bags, against 100 in July. The first exports recorded in a long time were made during August: 800 bags of Timothy and 218 bags of Alsike to Germany, and 266 bags of Bluegrass to Holland.

R. S. Elliott & Co., New York seed brokers, have moved their offices from 2 Stone Street to 15 Whitehall Street; the Kemble Building, just around the corner.

THE SEED SITUATION AT MILWAUKEE

BY C. O. SKINROOD

Receipts of seeds at Milwaukee for the month of August were liberal as compared with the corresponding time last year, indicating free sales by producers. The receipts of Clover were no less than 564,325 pounds, as compared with none received a year ago. The figures for Timothy seed were even more striking, with 1,359,647 pounds received as compared with 39,318 pounds a year ago. The farmers are evidently disposed to let go of their holdings promptly in the fear of prices going down.

Shipments also show some increase but not in proportion to the receipts. The shipments of Clover seed for the past August were 726,166 pounds as compared with 60,000 pounds for the corresponding month a year ago, or about 12 times as large as last year. Shipments of Timothy seed for August this year were 109,160 pounds as

compared with 73,000 pounds a year ago, indicating some gain, but slight compared with Clover shipments.

The report on the Milwaukee seed market for the past month shows a strong demand the entire month for Clover with some improvements in prices, while the Timothy market was easier. The flax market held its own and moderate offerings moved readily. The market was fairly broad as shippers and dealers were in the trade at all times. Crushers were out for all the flax offered here. The prices as reported for the month were \$12 to \$19 for Red Clover, \$8 to \$15 for Alsike, \$18 to \$31 for White Clover, \$3 to \$4.50 for poor to good Timothy and \$4.50 to \$5.75 for the choice to fancy.

Wisconsin is having one of the best corn years in its history and the call has gone out from the college of agriculture to save enough seed corn to last two years or more. The corn will be well matured this year and in admirable condition to save for seed, according to E. D. Holden of the agronomy department of the College of Agriculture. He points out that Wisconsin has suffered severe losses in the past because of the lack of good seed corn.

The latest crop on Wisconsin field peas shows an estimated yield of 514,000 bushels as compared with 643,000 bushels estimated a month previous and 1,063,000 bushels the harvest for last year. The five-year average production of field peas has been 873,000 bushels. This indicates a yield of about half that of last year and 40 to 50 per cent less than the five-year average.

The production of field beans in Wisconsin was also cut down badly by the unprecedented dry weather for several weeks. The yield is estimated at 87,000 bushels as compared with 96,000 bushels for the month previous, 147,000 bushels as the harvest for last year and 157,000 bushels the yield in the five-year average. In other words, field beans will not be much more than half a crop for 1921.

The Courteen Seed Company reports that Timothy will be an average crop probably, although there are possibilities that it will be a little under the average. The movement of Timothy seed from the farms is reported as unusually heavy. In general the Courteen company sees a good demand for seeds in sight and believes that this will therefore mean a good year in the seed business. Seeds are coming faster almost every day, indicating that the farmers are eager to dispose of their goods. The Courteen company reports further that the recent rains have very materially improved the situation in Red Clover, but even with the recent improvement, it is not expected that the Clover yield will be anywhere near normal. The severe and prolonged dry weather, it is said, caused damage which cannot possibly be made up so late in the season. The company asserts that the White Clover crop is very short, in fact the shortest in many years. The Alsike yield is said to be below that of last year.

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the offerings of Timothy are very liberal, while the demand is not large. The company believes that the trade in seeds ought to be lively up to the end of October, but that in all probability, the seed business will be a little quiet after the fall buying demands have been met. This will depend, however, largely on the weather, the company reports. The late rains have helped the Red Clover crop, the Kellogg company says, but it is still believed that the yields will be below the average. Offerings of Clover up to this time are reported light.

There is just a fair demand for Alfalfa, the company reports, while the supply is said to be good from the Southwest. The offerings of Alsike are said to be good with quality fair, with an average crop in sight, while demand is rather light. The demand for White Clover is small, the quality is not high and the crop is rather short.

The North American Seed Company reports that the receipts of Red Clover are just beginning to arrive and that it will be a month or more before the volume of trade reaches the peak of the movement. The quality of the seed coming is reported as very good with demand fair and prices ranging from \$19 to \$19.50. An average crop of Red Clover is expected. There has not been much change in prices, the North American finds, while the trade outlook is good and the prospects are for a steady seed market. Just a fair crop of Timothy is reported by the company which is selling from \$4 to \$5. Alfalfa prices are reported by the North American at \$17 to \$23, the market being a little stronger and a good crop in sight. The demand is reported good despite larger offerings than last year. The higher grade of Alsike is reported as scarce by the North American, and there is demand enough to take care of all receipts. About an average crop is expected. Prices are given at \$14 to \$17. The White Clover market is reported a little easier at \$32 to \$38. Quality is said to be good, receipts are fair and the crop is believed to be a little below the average.

The L. Teweles Seed Company reports that the outlook is good for an active fall trade in seeds. The Red Clover crop is just beginning to come in, quality is good, demand is fair and prices are quoted around \$16 to \$18. The report on Timothy shows lower prices at \$4.25 to \$4.75. Quite a large crop of fair quality is looked for. The quality of Alfalfa is reported very good with prices in the neighborhood of \$17. The Teweles company finds the trade in White Clover slow at \$33 to \$36. Offerings are fairly large and the yield is expected to be moderate. Only a fair yield of Alsike is also looked for. The quality, however, is good and the offerings are liberal at \$13 to \$16.

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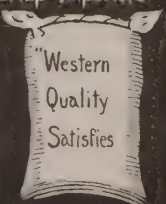
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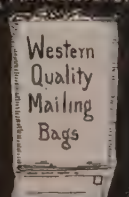
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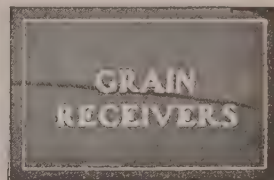
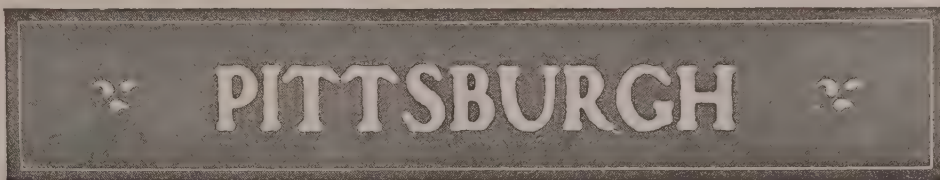
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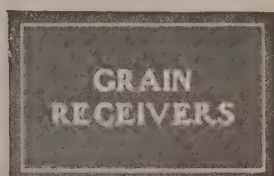
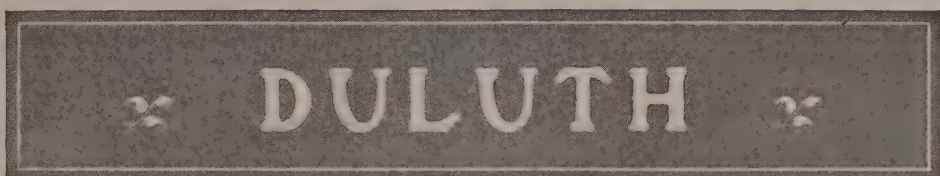
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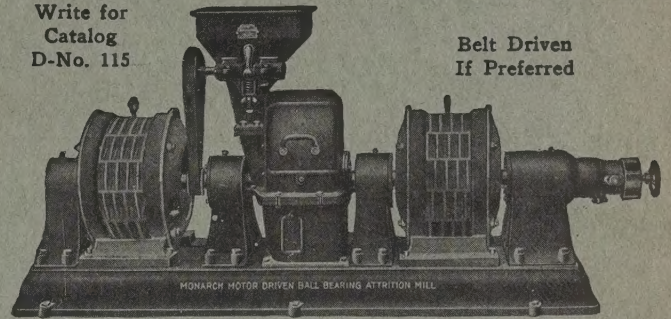
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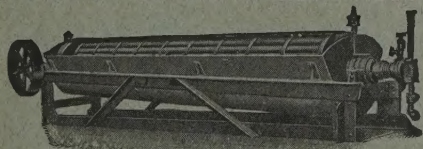
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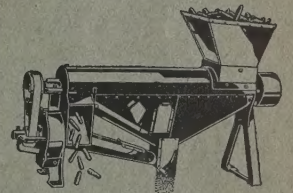
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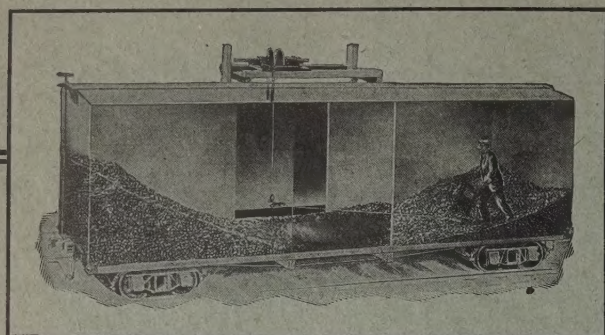


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